		Page 1
IN THE UNITED STA	ATES DISTRICT COURT	
FOR THE SOUTHERN	N DISTRICT OF IOWA	
UNITED STATES OF AMERICA	A, )	
Plaintiff,	)	
v.	) Criminal No.	
JESSE R. BENTON,	) 4:15-CR-103-JAJ-HCA	
JOHN F. TATE, and	)	
DIMITRIOS N. KESARI,	)	
Defendants.	)	
VIDEOTAPED DEPOSI	TION OF WESLEY YOO	
Monday, Septe	ember 28, 2015	
Reported by:		
Lori J. Goodin, RPR, CLR	R, CRR,	
Job No: 14915		

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                  The deposition of WESLEY YOO was
     convened on Monday, September 28, 2015,
 4
     commencing at 10:02 a.m., at the offices of,
 5
     Barnes & Thornburg, 1717 Pennsylvania Avenue,
 6
 7
     Northwest, Suite 500, Washington, D.C.
     before Lori J. Goodin, Registered Professional
 8
 9
     Reporter, Certified LiveNote Reporter, Certified
10
     Realtime Reporter, Realtime Systems Administrator,
     and Notary Public in and for the District of
11
     Columbia.
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,		Page 6
1	CONTENTS	
2	EXAMINATION BY PAGE	
3	Direct Mr. Kravis 10	
4	Voir Dire Mr. Mills 15	
5	Direct Mr. Kravis 19	
6	Cross Mr. Mills 39	
7	Cross Mr. Binnall 56	
8	Cross Mr. Howard 67	
9	Cross Ms. Sinfelt 73	
10	Redirect Mr. Kravis 74	
11	Recross Mr. Mills 80	
12		
13	EXHIBITS	
14	GOVERNMENT	
15	NO. DESCRIPTION PAGE	
16	1 CD containing Cellebrite Report of Exam 37	
17	of cell phone of Mr. Kesari	
18	2 Document containing serial number of 28	
19	examined laptop	
20		
21	EXHIBITS	
22	YOO	
23	NO. DESCRIPTION PAGE	
24	3 Curriculum Vitae of Wesley Yoo 16	
25	4 Report of examination, 8/4/2015 39	

,				Page 7
1		EXHIBITS CONTINUED		
2	YOO			
3	NO.	DESCRIPTION	PAGE	
4	5	Chain of custody document for laptop	68	
5		Item IB44		
6	6	Chain of custody document for iPhone	69	
7		Item 1B43		
8				
9		(Original Exhibits retained by counse	el.)	
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				

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1	PROCEEDINGS	
2	THE VIDEOGRAPHER: This is Disk	
3	Number 1 of the video deposition of Wesley	
4	Yoo, in the matter of United States of	
5	America v. Jesse R. Benton, John F. Tate and	
6	Dimitrios N. Kesari, in the United States	
7	District Court for the Southern District of	
8	Iowa, Criminal Number 4:15-CR-103-JAJ-HCA.	
9	This deposition is being held at	
10	1717 Pennsylvania Avenue, Northwest,	
11	Washington, D.C. on September 28, 2015, at	
12	approximately 10:02.	
13	My name is Carlos Garcia, from the	
14	firm of TransPerfect Legal Solutions and I am	
15	the legal video specialist.	
16	The court reporter is Lori Goodin,	
17	in association with TransPerfect Legal	
18	Solutions.	
19	Will counsel please introduce	
20	themselves.	
21	MR. KRAVIS: Good morning everyone,	
22	my name is Jonathan Kravis, and I represent	
23	the United States.	
24	MR. PILGER: I am Richard Pilger, I	
25	also represent the United States.	

		Page 9
1	MR. MILLS: Good morning. Laurin	
2	Mills on behalf of John Tate. And since this	
3	is a trial type deposition, I would like to	
4	invoke the rule on witnesses.	
5	MR. KRAVIS: Okay. Special Agent	
6	Brooks, why don't you wait outside, thank	
7	you. Just in case. I don't think you are	
8	likely a trial witness, but just in case.	
9	MR. BINNALL: Jesse Binnall,	
10	J-E-S-S-E, last name B-I-N-N-A-L-L on behalf	
11	of Dimitrios Kesari.	
12	MR. HOWARD: Roscoe Howard with	
13	Barnes & Thornburg. My last name is spelled	
14	H-O-W-A-R-D. I represent Jesse Benton.	
15	MS. SINFELT: Meena Sinfelt,	
16	S-I-N-F-E-L-T, I also represent Jesse Benton,	
17	with Barnes & Thornburg.	
18	MR. HOWARD: Did you want the	
19	paralegals to introduce themselves?	
20	MR. KRAVIS: That's fine.	
21	THE VIDEOGRAPHER: Would the court	
22	reporter please swear in the witness.	
23	* * *	
24	WESLEY J. YOO,	
25	a witness called for examination, having been	

- 1 first duly sworn, was examined and testified as
- 2 follows:
- THE VIDEOGRAPHER: Please proceed.
- 4 DIRECT EXAMINATION
- 5 BY MR. KRAVIS:
- 6 Q. Good morning, sir.
- 7 A. Good morning.
- 8 Q. What is your name?
- 9 A. My name is Wesley J. Yoo. My last
- 10 name is spelled Y-O-O.
- 11 Q. And, what do you do for a living?
- 12 A. I am a special agent for the Federal
- 13 Bureau of Investigation.
- 14 Q. How long have you been a special
- 15 agent with the Federal Bureau of Investigation?
- 16 A. I have been a special agent for
- 17 approximately 15 years.
- 18 Q. And, what is your current assignment
- 19 with the Federal Bureau of Investigation?
- 20 A. I am currently assigned as a Special
- 21 Agent Forensic Examiner With the Computer
- 22 Analysis Response Team which is primarily
- 23 responsible for processing and analysis of
- 24 digital media.
- Q. And, how long have you been a

- 1 forensic examiner with the FBI?
- 2 A. I have been with the FBI as a
- 3 forensic examiner for approximately ten years.
- 4 Q. And what exactly does a forensic
- 5 examiner with the FBI do?
- 6 A. As a forensic examiner, I am
- 7 responsible for the processing and analysis of
- 8 information and potential evidentiary material
- 9 from digital storage media.
- 10 For example, hard drives, thumb
- 11 drives, and so forth.
- 12 Q. Did you receive any specialized
- 13 training to allow you to do that work?
- 14 A. Yes. In order to be -- in order to
- 15 be certified as a forensic examiner, there is a
- lengthy process that one must go through which
- involves a specialized training, and at the end
- 18 of that training it involves testing and then
- 19 ultimately a certification of you being certified
- 20 as a forensic examiner.
- Q. You said that is a lengthy process.
- 22 About how long, exactly, is that process?
- 23 A. It depends on the individual, but
- 24 when I went through the program it took
- 25 approximately about two years.

- 1 Q. And, you said that during those two
- 2 years you received training?
- 3 A. Specialized training, yes, sir.
- 4 For example, one of the trainings
- 5 that you have to take as part of your training
- 6 curriculum is A Plus, which deals with hardware,
- 7 software, and at the end of that training you are
- 8 then certified to handle those types of material
- 9 in your forensic exams.
- 10 O. And did you also say that part of
- 11 your two years of training required you to do
- 12 some testing in this area?
- 13 A. Yes. At the end of each process an
- 14 individual is routinely checked to make sure that
- 15 you have a understanding of what that field
- 16 entails.
- 17 So, the tools that you are using to,
- 18 the tools that you are using on a daily basis to
- 19 do your job, you are tested on. And then
- 20 ultimately, you know, you are given a pass/fail.
- Q. And how did you do on those tests?
- 22 A. I passed every single one of those.
- Q. And at the end of your training
- 24 after you passed the tests, what, if any
- 25 certifications did you receive from the FBI?

- 1 A. I was certified to deal with what
- 2 they call Window platforms which are
- 3 Windows-based operating systems.
- 4 And then later on I received the
- 5 cell phone, so I was certified to do cellphone.
- 6 And the other certifications that I was given was
- 7 dealing with Apple McIntosh platforms.
- 8 Q. And when was it that you received
- 9 that certification from the FBI?
- 10 A. In 2004 or '5. I can't recall
- 11 exactly. But, I believe it is in my curriculum
- 12 vitae.
- 13 Q. And, since the time that you
- 14 received that certification from the FBI, what,
- 15 if anything, have you done to keep up to date
- 16 with developments in your field?
- 17 A. As part of best practices that
- 18 oversees our program, everyone that is certified
- 19 as a forensic examiner, on an annual basis must
- 20 undergo a proficiency test as well as additional
- 21 training to maintain the knowledge in the field,
- 22 as well as maintaining the best practices that
- is, that are involved in the processing and
- 24 analysis of the digital media.
- Q. And how have you done on your most

- 1 recent proficiency exams?
- 2 A. I have passed.
- 3 Q. Approximately how many cell phones
- 4 would you say you have analyzed in your career
- 5 with the FBI?
- 6 A. Numerous. I mean, I think it must
- 7 be maybe hundreds.
- 8 Q. And, about how many computers have
- 9 you analyzed in your career with the FBI?
- 10 A. Again, too many to count, but
- 11 numerous.
- 12 O. And, without listing all of them,
- 13 what are some of the certifications that you hold
- 14 in this field?
- 15 A. Like I stated before, again Windows,
- 16 the most recent one that I have been certified
- 17 was through the SANS organization which deals
- 18 with, again, Windows platform, forensic exam of
- 19 digital media. So, that was my most recent
- 20 certification that I have.
- 21 MR. KRAVIS: At this time the
- 22 government offers Special Agent Wesley Yoo as
- an expert in the field of digital forensics.
- MR. MILLS: Would it be possible for
- 25 me to voir dire the witness.

Page 15 1 MR. KRAVIS: Of course. 2 VOIR DIRE EXAMINATION 3 BY MR. MILLS: 4 Q. Good morning Agent Yoo, I am Laurin Mills, counsel for Mr. Tate. 5 You have an undergraduate degree in 6 7 biology. Is that correct? That is correct. 8 Α. And you received that degree in 9 O. 10 1991? That is correct. 11 Α. 12 O. And you also have an undergraduate degree in chemistry; is that right? 13 14 Α. That is correct. 15 0. And you received that degree in 16 1992, right? 17 Α. That's correct. 18 0. In 1996 you received a master's 19 degree in analytical chemistry; is that right? 20 Α. That's correct. 21 Q. And from January of 1996 until May of 2000, you worked as a chemist; is that right? 22 23 That is correct, I believe, yes. Α. 24 And not as a computer forensic Ο. 25 analyst?

Page 16 1 That is correct. Α. 2 I'm going to show you what we will Ο. 3 mark as exhibit, since you already have two exhibits marked, I will call this Exhibit 3. 4 5 MR. KRAVIS: Very well. (Yoo Exhibit Number 3 6 7 marked for identification.) BY MR. KRAVIS: 8 9 Agent Yoo, you have the Exhibit 3 in O. front of you, don't you? 10 11 Α. Yes. 12 Ο. Can you identify it? 13 Α. Yes. Let me help you. Exhibit 3 is the 14 O. 15 Government's Notice of Expert Witnesses; is that 16 correct? 17 Α. Yes. 18 And that is your name on the first Ο. 19 page in bold letters, Wesley Yoo; is that 20 correct? 21 That is correct. Okay. And attached to Exhibit 3 22 Ο. 23 toward the end is a four-page document entitled Curriculum Vitae, correct? 24 25 Α. Yes.

- 1 O. And this is the curriculum vitae of
- Wesley J. Yoo; is that correct?
- 3 A. That is correct.
- 4 Q. And a curriculum vitae is a fancy
- 5 name for a resumé; is that right?
- 6 A. Yes.
- 7 Q. And at the bottom of Page 3 of 4 is
- 8 a heading called Publications.
- 9 Do you see that?
- 10 A. Yes.
- 11 Q. And, you have been an author on
- 12 three published academic papers; is that right?
- 13 A. Yes, according to this, yes.
- 0. And isn't it true that all of the
- 15 academic papers on which you have been an author
- 16 have been in the field of chemistry?
- 17 A. That is correct.
- 18 Q. And they all dealt with
- 19 supercritical fluid extraction; is that correct?
- 20 A. Yes.
- Q. And they are all published in the
- 22 1990s?
- 23 A. That is correct.
- Q. And your resumé also lists five
- 25 academic presentations, correct?

- 1 A. Goodness gracious. Yes.
- 2 Q. And all of those presentations were
- 3 also in the 1990s?
- 4 A. Yes.
- 5 O. And all of them were in the field of
- 6 chemistry; is that right?
- 7 A. Yes.
- 8 Q. Okay. And, in fact, your resumé
- 9 does not list you as an author on a single
- 10 published paper in the field of computer
- 11 forensics, does it?
- 12 A. That is correct.
- Q. And, it doesn't list you as an
- 14 author on a single published paper in the field
- 15 of computer science, does it?
- 16 A. That is correct.
- 17 Q. Okay. And it doesn't list a single
- 18 presentation in the field of computer science,
- 19 does it?
- 20 A. That is correct.
- Q. And your resumé does not list a
- 22 single presentation in the field of computer
- 23 forensics, does it?
- 24 A. That is correct.
- Q. Okay. And your resumé does not list

- 1 any instances where you have been qualified as an
- 2 expert witness in the field of computer science,
- 3 does it?
- 4 A. That is correct.
- 5 Q. And it doesn't list a single
- 6 instance where you have been qualified as an
- 7 expert witness in digital forensic sciences, does
- 8 it?
- 9 A. That is correct.
- 10 Q. Okay.
- MR. MILLS: Your witness.
- 12 DIRECT EXAMINATION (resumed)
- 13 BY MR. KRAVIS:
- 14 Q. Thank you. Very briefly Special
- 15 Agent Yoo, in your role as a forensic examiner
- 16 for the FBI, is it your job to publish papers or
- 17 is it your job to analyze digital evidence in
- 18 criminal investigations?
- 19 A. My job is to process digital
- 20 evidence, not publish.
- Q. Now, Special Agent Yoo, I want to
- 22 ask you some questions about your field, about
- 23 how digital forensics works.
- What are the steps you take to
- 25 perform a forensic analysis of an electronic

- 1 device like a computer?
- 2 A. In general terms, the Number 1 most
- 3 important thing is the integrity of the
- 4 evidentiary material.
- 5 Q. Okay. And what is it that you mean
- 6 by the integrity of the evidentiary material?
- 7 A. The best practices are utilized to
- 8 ensure that I am not introducing any artifacts to
- 9 the evidence where thereby I'm changing stuff or
- 10 making modifications, additions, deletions to the
- 11 material that I am analyzing.
- 12 Q. And how is that you -- or what are
- 13 the steps that you take to make sure that you are
- 14 not modifying the electronic evidence that you
- 15 are charged with examining?
- 16 A. The initial process would involve
- 17 some kind of a baseline.
- 18 So, the first thing I would do is do
- 19 an inventory of all of the material that I will
- 20 be processing or analyzing from a physical
- 21 standpoint as well as what I call a digital
- 22 perspective.
- So, for example, I have to account
- 24 for everything that is within a digital storage
- 25 media.

- 1 For example, in a hard drive, I've
- 2 got to make sure that what I am looking at is
- 3 everything that is within the hard drive. And I
- 4 have to account for that so that my beginning and
- 5 my ending will be exactly the same.
- Another tool that we use is write
- 7 protection devices.
- 8 Q. And what are write protection
- 9 devices?
- 10 A. It could be a physical device or a
- 11 software device where it is connected with your
- 12 digital storage media and it prohibits any write
- 13 functions to that particular device.
- 14 So that anything I do gets stopped
- 15 by this particular device.
- 16 Q. And is that one of the methods you
- 17 used to make sure that you are not modifying the
- 18 digital evidence that you are examining?
- 19 A. That is correct. Yes.
- 20 O. Go ahead.
- 21 A. I did use a write protection device
- 22 for all of my processing and all of my analysis
- 23 in this particular case.
- Q. So, once you have done that physical
- 25 and digital examination of the electronic devices

- 1 that you are examining, what is the next thing do
- 2 you?
- 3 A. The other tool or practice that we
- 4 utilize to ensure that no modifications are done
- 5 is on a regular basis what we do is MD5 algorithm
- 6 checks.
- 7 Q. And what are MD5 algorithm checks?
- 8 A. Basically it is a fancy mathematical
- 9 computation where you run the process and it
- 10 generates a unique number, which is like a
- 11 fingerprint of, let's say, for example, a file.
- 12 You have a file. You run the fancy
- 13 algorithm. It generates a unique number and that
- 14 particular number should be maintained throughout
- 15 your whole processing.
- 16 So, you compare that particular
- 17 number at the beginning and at interim steps to
- 18 ensure that that number stays consistent. And,
- 19 thereby, it indicates that no changes have been
- 20 made.
- Q. And, once you have done the initial
- 22 review of the items and made sure these checks
- 23 that you have described are in place, the
- 24 algorithm, the write protection, what is it that
- 25 you do with an electronic device when you receive

- 1 it to begin your analysis?
- 2 A. Again, with all of those best
- 3 practices in place, the general inventory is done
- 4 where I note the serial number, any unique
- 5 features associated with the device.
- 6 Again, total accountability at the
- 7 beginning.
- 8 And then, what we do is take what we
- 9 call a bit-by-bit image which is an exact
- 10 duplicate copy of the storage media so that you
- 11 are not working off of a, the original evidence,
- 12 you are actually working off a bit-by-bit copy,
- 13 which is an exact copy.
- Q. And why do you do that? Why is it
- 15 that it is important in your work to make sure
- 16 that you are working off an exact copy of the
- 17 evidence rather than the original device itself?
- 18 A. Because your best evidence is the
- 19 original. And you do not want to compromise that
- 20 best evidence.
- But, using a bit-by-bit copy, you
- 22 ensure that you have the integrity of the
- 23 original evidence, but at the same time you have
- 24 confirmation that it is an exact copy.
- Q. And you touched on this a moment

- 1 ago, but just to make the point clearly, what is
- 2 the evidence you have or the check to make sure
- 3 that the duplicate that you have created is an
- 4 exact bit-by-bit copy of the original item?
- 5 A. Again, it goes back to the MD5
- 6 algorithm where, when you make your bit-by-bit
- 7 copy, an MD5 number is generated for that
- 8 particular bit-by-bit copy.
- 9 That number is compared to
- 10 throughout the whole analysis process at
- 11 particular points to ensure that that number
- 12 stays consistent with the beginning and at the
- 13 end.
- 14 Q. Once you have made the bit-by-bit
- 15 copy and confirmed that the bit-by-bit copy is an
- 16 exact duplicate of the original device, what is
- 17 the next step in your analysis?
- 18 A. The next step is using that
- 19 particular bit-by-bit copy, is the processing
- 20 phase which we use specialized tools to parse
- 21 through that image and it will go through the
- 22 image and pull out deleted files, special
- 23 categories like that, e-mails, documents, so that
- 24 the end user, in this case a case agent, can go
- 25 through the material and review for potential

- 1 evidentiary material.
- 2 Q. And is it your job to go through the
- 3 copy or image of the item to find relevant
- 4 evidence?
- 5 A. No, it is not.
- 6 Q. Whose job is it?
- 7 A. That particular responsibility falls
- 8 on the case agent.
- 9 Q. And, what is the platform, or tool,
- 10 or network you use to make the analysis that you
- 11 do available to the case agent to go through and
- 12 identify relevant material?
- 13 A. We have a system called CAIR.
- 14 Q. What does CAIR stand for?
- 15 A. Case Agent Investigative Review.
- 16 O. And what is CAIR?
- 17 A. CAIR is a utility that we use to
- 18 provide the case agent a platform to review the
- 19 material that I had processed in a format which
- 20 is readable.
- 21 And that is some, of the material
- 22 cannot be read in a very easy format. So,
- e-mails show up as e-mails, documents show up as
- 24 documents.
- Q. And who is responsible for uploading

- 1 the materials to the CAIR System?
- 2 A. I am.
- 3 Q. And what happens to the materials
- 4 after they are uploaded to the CAIR System?
- 5 A. Once it is uploaded into the CAIR
- 6 System, the agent will go through the material
- 7 looking for potential evidentiary material.
- 8 Once the agent deems that a
- 9 particular file could be of evidentiary material,
- 10 he or she will bookmark that particular file for
- 11 maybe further investigative review or for further
- 12 analysis and ultimately an FTK Report is
- 13 generated if it is deemed relevant.
- 14 Q. I want to ask you some questions now
- 15 about your work on this case.
- 16 Were you asked to perform forensic
- 17 analysis like the one that you have just
- 18 described on a computer in this case?
- 19 A. Yes.
- 20 Q. And, did you prepare a report
- 21 explaining the steps that you took to analyze the
- 22 computer in this case?
- 23 A. Yes.
- Q. Now, as you sit here, do you
- 25 remember the serial number of the computer that

- 1 you were asked to examine?
- A. No, I do not.
- 3 Q. During your analysis, did you record
- 4 the serial number of the computer anywhere?
- 5 A. Yes, I did. In my notes.
- 6 Q. And, is it recorded also in your
- 7 report?
- 8 A. Yes.
- 9 Q. And the serial number of the
- 10 computer that you recorded in your report, was it
- 11 recorded accurately when you put it in the
- 12 report?
- 13 A. Yes.
- 14 Q. In fact, is it part of your job to
- 15 make sure that you are accurately recording the
- 16 serial numbers of the items that you examined?
- 17 A. That is correct, yes.
- 18 Q. And did you document the serial
- 19 number of the computer contemporaneously, or as
- 20 you were doing your work on the computer?
- 21 A. Yes, I did.
- Q. Okay. I'm going to show you what
- 23 has been marked for identification and shown to
- 24 defense counsel as Government's Exhibit 2. Do
- 25 you recognize Government's Exhibit 2?

Page 28 1 (Government's Exhibit Number 2 2 marked for identification.) 3 THE WITNESS: Yes. 4 BY MR. KRAVIS: What is Government's Exhibit 2? 5 0. It is my Dell Recs Report of 6 Α. 7 Examination for this particular case. And do you see the serial number of 8 Q. the computer that you examined for this case 9 written on the report? 10 11 Α. Yes. 12 Ο. Is that next to where it says Item 1B44? 13 14 Α. Yes. 15 Okay. I'm going to ask you to read 16 out loud now the serial number that you recorded 17 for the computer on your report. The serial number for the computer 18 Α. 19 is C02JG3N6DK02. 20 0. Thank you Special Agent Yoo. 21 And I'm taking back from you now Government's Exhibit 2. 22 23 Now, what did you do with that 24 computer? 25 Again as I stated before, a lengthy Α.

- 1 inventory process was performed. Then, the next
- 2 step involved the archival image, archival image
- 3 of the digital storage media that was within the
- 4 laptop, in this particular case.
- 5 And then, processing the image so
- 6 that the case agent can review the material.
- 7 Q. Do you remember earlier in your
- 8 testimony you talked about the steps that you
- 9 take to ensure that the copy of the item that you
- 10 are working from is bit-by-bit identical to the
- 11 original, the fancy algorithm as you put it and
- 12 so forth?
- 13 A. Yes.
- Q. Did you take those steps in your
- 15 analysis of the computer in this case?
- 16 A. Yes, I did.
- 17 O. And what were the results of those
- 18 checks that you did throughout the process on
- 19 your examination of the computer in this case?
- 20 A. The checks were consistent from the
- 21 beginning to the end.
- Q. Now, earlier in your testimony you
- 23 also talked about the CAIR System. Do you
- 24 remember that?
- 25 A. Yes.

- 1 O. Okay. What did you do with the
- 2 results of the computer that you analyzed in this
- 3 case when you had completed your analysis?
- 4 A. I provided the material for the CAIR
- 5 System for further review to the case agent so
- 6 that the potential evidentiary material can be
- 7 searched for.
- 8 Q. And, does the CAIR System archive or
- 9 categorize, analyze digital evidence using case
- 10 ID numbers to make sure that the case agent is
- 11 looking at the right thing when they log onto the
- 12 CAIR System?
- 13 A. Yes. When I set out the CAIR System
- 14 I have to ensure that it is a unique number
- 15 associated with the request by the case agent.
- 16 Q. And did you use such a unique case
- 17 ID number in this case?
- 18 A. Yes, I did.
- 19 Q. As you sit here today, do you
- 20 remember off the top of your head, the unique
- 21 Case ID Number you used for this case?
- 22 A. No.
- Q. Okay. I'm going to show you again
- 24 what has been marked and provided to defense
- 25 counsel as Government's Exhibit 2, your report.

- 1 Did you record on your report the
- 2 unique Case ID Number you used for this case on
- 3 the CAIR System?
- 4 And you can look at the whole
- 5 report. But I will just direct your attention to
- 6 the top right corner of the first page.
- 7 A. Yes.
- 8 Q. And was that unique Case ID Number
- 9 accurate when you wrote it on your report?
- 10 A. Yes.
- 11 Q. In fact, it is a part of your job to
- 12 make sure that the Case ID Numbers are accurate
- 13 so you don't mix-up evidence for different cases?
- 14 A. That is correct.
- 15 Q. Okay. And did you record the Case
- 16 ID Number as you were doing the work on this
- 17 case?
- 18 A. Yes, I did.
- 19 Q. Okay. Can you read from your report
- 20 the unique Case ID Number that you used for this
- 21 case?
- 22 A. It is 56D-WF-2881718.
- Q. And, Special Agent Yoo, I'm just
- 24 going to collect Government's Exhibit 2 from you
- 25 again.

- 1 And, after you put the results of
- 2 your analysis of the computer in this case on the
- 3 CAIR System, did you do any further work with
- 4 that material or was it just turned over to the
- 5 case agent for review?
- 6 A. It was turned -- for the work in --
- 7 what sense?
- Q. I just mean, after -- let me try to
- 9 ask the question a better way.
- 10 A. Okay.
- 11 Q. After you put the results of the
- 12 computer search on the CAIR System, whose
- 13 responsibility is it at that point to do any
- 14 further analysis on the material you have put on
- 15 the CAIR System?
- 16 A. It was the case agent's.
- 17 Q. Okay. Now, in addition to the
- 18 computer, were you also asked to provide a
- 19 digital analysis of a cell phone in this case?
- 20 A. Yes.
- Q. And, as you sit here today, do you
- 22 remember the serial number of the cell phone that
- 23 you were asked to analyze?
- 24 A. No.
- Q. Did you record the serial number of

- 1 the cell phone you were asked to analyze in your
- 2 report?
- 3 A. Yes.
- 4 Q. I'm going to show you again
- 5 Government's Exhibit 2. Was the serial number of
- 6 the cell phone accurate when you recorded it?
- 7 A. Yes.
- 8 Q. And, again, did you record the
- 9 serial number of the phone like with the
- 10 computer, at the same time that you were doing
- 11 your work on the case?
- 12 A. Yes, I did.
- 13 Q. Okay. I'm going to direct your
- 14 attention to the Line 1B43 on the report and ask
- 15 you to read out loud the serial number of the
- 16 cell phone that you analyzed in this case.
- 17 A. The cellphone is an Apple iPhone and
- 18 the serial number is C39HL2XNDTC1.
- 19 Q. Thank you, Special Agent Yoo.
- I'm going to collect Government's
- 21 Exhibit 2 from you.
- Now, as with the computer, when you
- 23 were doing the analysis of the cell phone in this
- 24 case, did you use the tools or methods that we
- 25 talked about earlier to make sure that your image

- of the cell phone was a bit-for-bit copy of the
- 2 contents of the cell phone itself?
- 3 A. In processing the cell phone, a
- 4 different approach was taken, due to the fact
- 5 that limitations with the tools that were
- 6 available to me did not preclude me to use
- 7 certain functions.
- For example, access to e-mail was
- 9 rather difficult so that the numerous tools,
- 10 several tools had to be used to extrapolate the
- information that was requested by the case agent.
- 12 And, in terms of write protection,
- 13 and again it is not feasible for a particular
- 14 device, mobile devices.
- 15 Q. So, what are the steps that you took
- 16 to perform your digital analysis of the cell
- 17 phone in this case?
- 18 A. Again, just like the laptop, best
- 19 practice involves inventory of the material that
- 20 you are processing.
- 21 And to ensure that you do not
- 22 introduce any artifacts to your analysis, you do
- 23 not, I guess, step on or go through a process
- 24 where you are changing data or information on the
- 25 cell phone.

- 1 And, in this case instead of taking
- 2 a very aggressive approach to extrapolating
- 3 information requested by the case agent, a
- 4 logical extraction was performed rather than a
- 5 physical.
- 6 Q. What do you mean by rather than take
- 7 an aggressive approach? What do you mean by an
- 8 aggressive approach?
- 9 A. Aggressive in the sense that in
- 10 order to get at information which may not be
- 11 readily available, you must, there are ways to
- 12 actually get at that information by making
- 13 additions and modifications to the phone.
- 14 Q. So, am I right that what you are
- 15 saying is there are methods you can use to try to
- 16 get more information out of the phone that
- involve adding or modifying the phone in some
- 18 way?
- 19 MR. BINNALL: Objection, leading.
- 20 BY MR. KRAVIS:
- Q. Go ahead.
- 22 A. I could have taken an, an approach
- 23 where I could have made changes to the phone, for
- 24 example, jailbreaking is a common terminology.
- Q. What is jailbreaking?

- 1 A. Jailbreaking is actually making
- 2 changes to the operating system so that you can
- 3 access the whole file system on the phone.
- 4 Q. Did you, in your analysis of the
- 5 cell phone in this case, use jailbreaking or some
- 6 other aggressive search tool?
- 7 A. No. I did not.
- 8 Q. Why not?
- 9 A. Because I did not want to introduce
- 10 in artifacts or make any changes to the phone
- 11 when it was, when I determined that the laptop
- 12 might potentially contain the same type of
- information that was on the phone.
- Q. So, because you chose not to take
- 15 more aggressive steps in analyzing the phone,
- 16 were there some items on the phone that you did
- 17 not recover in your forensic analysis of the
- 18 phone?
- 19 A. That is correct.
- 20 Q. What -- well, let me ask a better
- 21 way.
- What items were you not able to
- 23 extract from the phone because you chose not to
- 24 use the more aggressive methods?
- 25 A. E-mail, specifically.

- 1 Q. If you were not able to get the
- 2 e-mails, what were you able to extract from the
- 3 phone?
- A. Photos, music, videos, some text
- 5 messages.
- 6 Q. And, the items that you were able to
- 7 recover from the cellphone, did you put those up
- 8 on the CAIR System like with the computer, or did
- 9 you do something else?
- 10 A. I did something else.
- 11 Q. What was it that you did with the
- 12 materials that you were able to extract from the
- 13 cell phone?
- 14 A. A report was generated for the case
- 15 agent to further review the material that was
- 16 extrapolated from the cell phone.
- 17 Q. Okay. I'm going to show you now
- 18 what has been marked for identification and shown
- 19 to defense counsel as Government's Exhibit
- 20 Number 1.
- 21 (Government's Exhibit Number 1
- 22 marked for identification.)
- 23 BY MR. KRAVIS:
- Q. Do you recognize Government's
- 25 Exhibit Number 1?

- 1 A. Yes.
- 2 O. What was Government's Exhibit
- 3 Number 1?
- 4 A. It was a Cellebrite report of exam.
- 5 Q. And, what is actually in front of
- 6 you, Government's Exhibit 1, is a CD that can
- 7 play on a computer, right?
- 8 A. That is correct.
- 9 Q. And have you had a chance to examine
- 10 the contents of this particular CD?
- 11 A. Yes.
- 12 O. And what is it that is on this
- 13 particular CD?
- 14 A. It is the Cellebrite report of the
- 15 iPhone belonging to Mr. Kesari.
- 16 Q. That is the phone that you analyzed
- 17 in this case?
- 18 A. Yes.
- 19 Q. And after you looked at the contents
- 20 of the CD, did you make any markings on the CD so
- 21 that you would be able to recognize it here at
- 22 this deposition?
- 23 A. Yes.
- Q. What are the markings you made on
- 25 this CD?

Page 39 1 I see my initials on the right lower Α. 2 corner of the CD. 3 Q. Okay. At this time the government moves Exhibit Number 1 as redacted into evidence. 4 5 MR. BINNALL: Objection to foundation. 6 7 MR. KRAVIS: May I have just a 8 moment, please? Thank you Special Agent Yoo, I have no further questions. 9 10 CROSS-EXAMINATION 11 BY MR. MILLS: 12 Ο. Good morning again, Agent Yoo. 13 I'm going to hand you what we will 14 mark as Exhibit Number 4. (Yoo Exhibit Number 4 15 16 marked for identification.) 17 MR. KRAVIS: Thank you. BY MR. MILLS: 18 19 Ο. Exhibit Number 4 is a Report of Examination, correct? 20 21 Α. Yes. 22 Ο. And the date of this report is 23 August the 4th, 2015, is that right? 24 Α. That is correct. 25 And, if you turn to Page 4 of 4 of Ο.

- 1 the report, that is your name there; isn't that
- 2 right?
- 3 A. Yes.
- 4 Q. But you did not sign Exhibit
- 5 Number 4, did you?
- 6 A. I believe the official report exam
- 7 has my signature.
- 8 Q. Okay. So, this, so the exhibit that
- 9 is in front of you right now is not the official
- 10 report, is it?
- 11 A. It may be a copy.
- 12 Q. Let me ask you this. Did you
- 13 actually write Exhibit 4?
- 14 A. Yes, I did.
- 15 Q. Okay. Did anyone assist you?
- 16 A. Nobody assisted me.
- 17 Q. Okay. On what date did you create
- 18 Exhibit 4?
- 19 A. August the 4th. Based on the date
- 20 of the report of exam on the first page.
- Q. Do you see the line that says
- 22 Reference on the first page? Toward the top?
- 23 A. Reference, yes, Service Request
- 24 Date.
- Q. And the service request is dated

Page 41 March 4th, 2014. Is that correct? 1 2 Α. That is correct. And the Service Request ID Number is 3 Q. 4 60336. MR. KRAVIS: Objection, calls for 5 6 hearsay. 7 BY MR. MILLS: 8 Q. That is what it says on your report, 9 correct? 10 That is what it says on my report. Okay. And, but, the date the items 11 12 were received was listed as May 29th, 2014; is that right? 13 14 MR. KRAVIS: Objection, calls for 15 hearsay. 16 BY MR. MILLS: 17 Q. That is what your report says, 18 right? 19 Α. That is correct. 20 Okay. So there was almost a 21 three-month delay between the date of the service request and your receipt of the items; is that 22 23 right? 24 That is correct. Α. 25 And the report says that the items Ο.

- 1 submitted were an Apple MacIntosh Mini.
- 2 MR. KRAVIS: Objection, calls for
- 3 hearsay. Object to the question about the
- 4 contents of the report which is hearsay
- 5 without establishing a foundation that the
- 6 witness does not recall or needs to be
- 7 impeached with the report. You can answer.
- 8 BY MR. MILLS:
- 9 Q. Okay. Do you recall answering a
- 10 service request for an Apple MacIntosh Mini?
- 11 MR. KRAVIS: Objection to witness
- 12 answering the questions with the report in
- front of him if the questions are not about
- the report.
- 15 BY MR. MILLS:
- 16 Q. Okay. Go ahead, you can answer.
- 17 A. That is what the report says.
- 18 Q. Okay. Let me ask you this
- 19 independently. You can take the report away.
- 20 Turn the report over.
- 21 Do you recall in connection with
- 22 this case doing a review of an Apple MacIntosh
- 23 Mini?
- A. Yes, sir.
- Q. And do you recall the serial number

- of the Apple MacIntosh Mini that you reviewed?
- 2 A. No.
- 3 Q. If you turn Exhibit 4 over. Does
- 4 that refresh your recollection?
- 5 A. Yes.
- 6 Q. Okay. And what was the serial
- 7 number of the Apple MacIntosh Mini that you
- 8 reviewed?
- 9 A. It looks like the serial number is
- 10 F4KJW7VVF193.
- 11 Q. Thank you. Now, did you review more
- 12 than one -- strike that.
- The number you just read was for an
- 14 Apple iPad Mini; is that correct?
- 15 A. Yes.
- 16 Q. Okay. And I think I asked you about
- 17 an Apple MacIntosh Mini?
- 18 A. I'm sorry.
- 19 Q. If you can look to the line above
- that, do you see Apple MacIntosh Mini?
- 21 A. Yes.
- Q. And do you recall actually reviewing
- 23 an Apple MacIntosh Mini in connection with this
- 24 case?
- 25 A. Yes.

- 1 O. What was the serial number of the
- 2 Apple MacIntosh Mini that you investigated?
- 3 A. The serial number is D2HHQ00CDTCK.
- 4 Q. Okay. And you also reviewed an
- 5 Apple iPad Mini. Is that correct?
- 6 A. Yes.
- 7 Q. Okay. And if you take a look at
- 8 Exhibit 4, does that refresh your recollection of
- 9 the serial number of the Apple iPad Mini that you
- 10 reviewed?
- 11 A. Yes.
- 12 O. And what is the serial number of the
- 13 Apple iPad Mini that you reviewed?
- 14 MR. KRAVIS: Objection, vague. The
- 15 report lists two different Apple iPad Minis.
- MR. MILLS: That's a fair objection.
- 17 BY MR. MILLS:
- 18 Q. How many Apple iPad Minis did you
- 19 review?
- 20 A. To the best of my recollection I
- 21 reviewed or processed two iPad Minis.
- Q. Okay. Can you tell us for the
- 23 record the serial numbers of the two Apple iPad
- 24 Minis that you processed?
- 25 A. Based on my, based on this

- 1 particular report, they both had the same serial
- 2 number which is F4KJW7VVF193.
- 3 Q. Okay. Is it your testimony they
- 4 both have the same serial number?
- 5 A. Based on this report it looks like
- 6 it, yes.
- 7 Q. I'm going to ask you to look closely
- 8 at the second Apple iPad Mini. It is a similar
- 9 serial number, but I don't believe it is the
- 10 same; is that correct?
- 11 A. Oh, I'm sorry, yes, you are correct,
- 12 yes.
- Q. And what is the, the item listed
- 14 1B16, what is the serial number for that?
- 15 A. The serial number for Item 1B16 is
- 16 F4KJQ8YSF193.
- 17 Q. Okay. Now, all of those devices
- 18 belong to Mr. Kesari, correct?
- 19 MR. KRAVIS: Objection, lack of
- 20 foundation. Calls for hearsay.
- 21 BY MR. MILLS:
- Q. Okay. Do you know who the devices
- 23 belong to?
- A. Yes, I believe so.
- Q. Okay. And who do they belong to?

Page 46 1 MR. KRAVIS: Objection, lack of 2 foundation. Calls for hearsay. 3 BY MR. MILLS: 4 Q. You can answer. I believe this belongs to 5 6 Mr. Sorenson. 7 Q. Mr. Sorenson. So, these are Mr. Sorenson's devices? 8 9 MR. KRAVIS: Objection, calls for 10 hearsay. BY MR. MILLS: 11 12 Ο. Okay. MR. KRAVIS: You can answer the last 13 14 question. 15 THE WITNESS: To the best of my 16 recollection, I believe it is Mr. Sorenson's, 17 yes. BY MR. MILLS: 18 Okay. Now, let me take you to, back 19 Ο. to Exhibit Number 2. 20 21 And Mr. Kravis asked you about Exhibit Number 2, correct? 22 23 Α. Yes. 24 And that is your report of Ο. 25 examination dated August 17th, 2015?

Page 47 1 Α. August, yes. 2 Okay. And, did you sign Exhibit Ο. 3 Number 2? Yes, I did. 4 Α. 5 0. Okay. Where is your signature found? 6 7 Α. Again, I believe this is a copy. Okay. So, the Exhibit Number 2 that 8 0. 9 is in front of you is not signed; is that 10 correct? That is correct. 11 Α. 12 0. Okay. Do you know if it varies in any way from the version you signed? 13 14 Α. It does not. 15 Okay. Now, the devices in Exhibit 16 Number 2 belong to Mr. Kesari, correct? 17 MR. KRAVIS: Objection, lack of foundation. Calls for hearsay. 18 BY MR. MILLS: 19 20 0. Okay. Do you know who they belong 21 to? 22 Mr. Kesari. Α. 23 Okay. What e-mail client software 0. was installed on each device? 24 25 Again, I can't recall because my Α.

- 1 responsibility does not delve into that
- 2 particular area other than maybe a cursory look.
- But, I do not know.
- 4 Q. Okay. Now, on your report,
- 5 Exhibit 2, you don't state what date your
- 6 examination took place, do you?
- 7 A. What page are you referring to?
- 8 Q. On any page of Exhibit Number 2?
- 9 A. No, it does not specify a date.
- 10 O. Okay. And it doesn't list any
- 11 e-mail messages that were located in your search,
- 12 does it?
- 13 A. No, it does not. Because again,
- 14 that is not my responsibility.
- 15 Q. Okay. And you can't recall whether
- 16 any of these devices contained e-mail client
- 17 software; is that correct?
- 18 A. E-mail client software, in what --
- 19 can you --
- 20 Q. Did it have software capable of
- 21 processing the e-mail?
- 22 A. Yes, it did, I believe. That is the
- 23 only way that I could get e-mail information.
- Q. Okay. And isn't it true you
- 25 couldn't, you didn't find any e-mail information

- on the iPhone that you reviewed; is that correct?
- 2 A. Again, the processing of the e-mail
- 3 made it very difficult to extrapolate enough
- 4 information, yes.
- 5 Q. And that is because Apple encrypts
- 6 e-mail, correct?
- 7 A. That's correct.
- 8 O. And FBI did not take the effort to
- 9 decrypt the e-mail; is that correct?
- 10 A. It is locked down pretty tightly in
- 11 terms of accessing the e-mail, yes.
- 12 Q. But you did find e-mail on the, on
- 13 his Mini, on his personal computer; is that
- 14 correct?
- 15 A. Can I clarify?
- 16 Q. Sure.
- 17 A. My answer. The first thing is,
- 18 during the inventory and accountability of that
- 19 particular iPhone, since it was unlocked, I can
- 20 physically go through the iPhone and see that
- 21 there were e-mail on the phone.
- I could visually observe that there
- 23 was e-mail on the phone.
- 24 To logically or physically
- 25 extrapolate that data in a, into another digital

- 1 format was the problems that I ran into.
- 2 So, there was e-mail on the phone.
- I just could not extrapolate it so
- 4 that the case agent can review it in our CAIR
- 5 System.
- 6 Q. So you did not upload any e-mail for
- 7 the case agent to review, correct?
- 8 A. Not from the iPhone.
- 9 Q. That's correct. But you did from
- 10 the personal computer?
- 11 A. Yes, I believe so. And the
- 12 Cellebrite report contains, again, some
- information from the iPhone that I was able to
- 14 extrapolate.
- 15 Q. Okay. And, do you recall what
- 16 e-mail client software was used on the personal
- 17 computer?
- 18 A. Not to the -- I did not record that,
- 19 I believe, in my notes, I believe.
- 20 Q. Okay. So you don't know if it was
- 21 Apple mail?
- 22 A. No.
- 23 Q. Okay.
- A. In fact, let me see, in my notes, I
- 25 believe in my notes I think it was Microsoft

Case 4:15-cr-00103-JAJ-HCA Document 590-1 Filed 05/23/16 Page 51 of 95 Page 51 Office, maybe. It was a client that was used 1 2 also. But I'm not quite sure. 3 Q. Do you recall whether -- now, Microsoft Office uses file folders to store 4 e-mail; is that correct? 5 (Indicating). 6 Α. 7 Q. You have to say yes or no. 8 Α. Yes. Do you recall which folders you were 9 Ο. able to access? 10 No. I didn't. 11 Α. 12 Ο. So, now, you are actually trained on Microsoft Outlook; is that correct? 13 14 Basically it is a Wintel platform, Α. 15 so, yes. 16 And when you say Wintel, you mean Windows/Intel, correct? 17 18 Α. Yes. 19 Ο. And Outlook is published by Microsoft; is that correct? 20 21 Α. That is correct. 22 And so it runs under Windows; is Ο.

A. That's correct.

that correct?

23

Q. And there is also a version that

Page 52 runs on the Mac under the Apple operating system? 1 2 Α. That's correct. 3 Q. But the Mac version runs 4 substantially the same way as the Windows version, correct? 5 Α. 6 Yes. 7 Q. And it has a file folders structure 8 for e-mail; is that right? 9 That's correct. Α. And one of the folders would be 10 Ο. 11 Inbox, correct? 12 Α. That is correct. Another would be Sent Items? 13 O. 14 Yes. Α. Another would be Deleted Items? 15 0. 16 Α. Yes. 17 Q. One would be, another item is Junk 18 Mail, correct? 19 Α. Yes. 20 Ο. Another could be Spam? 21 Α. Absolutely. 22 Ο. And you don't recall what item you 23 found, you don't recall what folder you found the 24 e-mail messages in? 25 If I can recall, I believe I had to

- 1 do a, what they call conversion so that the
- 2 e-mail that was on the laptop could be, in a
- 3 human readable format.
- 4 So, I believe in my notes I
- 5 specified a particular path in which I took to
- 6 process that conversion process.
- 7 Q. Does that path tell you what folder
- 8 it was in?
- 9 A. It was a general mailbox folder.
- 10 O. And one of the Microsoft Outlook
- 11 standard folders is Draft; is that correct?
- 12 A. Yes.
- 13 Q. And so as you sit here today you
- 14 don't know whether any of the e-mail you
- 15 processed was in a draft folder, do you?
- 16 A. I did not delve into that process
- 17 that deeply, because it was not requested of me
- 18 at that particular time. Or, for that matter,
- 19 afterwards.
- Q. How long did your analysis take of
- 21 the personal computer?
- 22 A. It could be a lengthy process based
- 23 on any issues with the hardware that you
- 24 encounter during your exam.
- Q. I mean but I'm asking you for the

- 1 analysis of Mr. Kesari's laptop. How long did
- 2 the analysis take?
- 3 A. It is, I can't recall. But if you
- 4 look in my notes it does document the time frame
- 5 in terms of dates. So, maybe, I don't know. I
- 6 would have to look at my notes.
- 7 Q. Now did you personally review any of
- 8 the e-mail that you extracted?
- 9 A. No, I did not.
- 10 Q. Did you personally review any of the
- 11 metadata?
- 12 A. No, I did not.
- Q. Okay. And do you know what metadata
- 14 is?
- 15 A. Yes, I do.
- 16 O. And what is metadata?
- 17 A. Metadata is information that is
- 18 associated with a particular file that exchanges
- 19 information, for example, date, time stamps,
- 20 geolocation information.
- 21 Q. Now --
- 22 A. Extra information basically.
- Q. And now I believe you, did you issue
- 24 any other reports in connection with this case
- 25 other than Exhibits 2 or 4?

- 1 A. I believe these are the only two
- 2 report of exams that I generated along with the
- 3 FTK reports that was mentioned previously.
- 4 Q. And when you say FTK you mean
- 5 Forensic Toolkit?
- 6 A. That is correct, yes.
- 7 Q. But, other than the Forensic Toolkit
- 8 report and Exhibits 2 and 4, there are no other
- 9 reports that you issued?
- 10 A. The one that was specified earlier,
- 11 Cellebrite report, no.
- 12 Q. Okay. Did you analyze any devices
- 13 that belonged to John Tate?
- 14 A. No.
- MR. KRAVIS: Objection, calls for
- 16 hearsay. Lack of foundation.
- 17 MR. MILLS: That is all I have, your
- 18 witness.
- 19 (Brief discussion off the record.)
- 20 BY MR. MILLS:
- Q. Did you review any devices that
- 22 belonged to John Tate?
- 23 MR. KRAVIS: Same objections. Lack
- of foundation, you can answer.
- THE WITNESS: No.

- 1 CROSS-EXAMINATION
- 2 BY MR. BINNALL:
- 3 Q. Good morning, Agent Yoo. My name is
- 4 Jesse Binnall. I represent Dimitrios Kesari.
- 5 The date on the Report of
- 6 Examination on Government's Exhibit 2, that is
- 7 August the 17th, 2015, correct?
- 8 A. That is what the report says, yes.
- 9 Q. Okay. But the service request was
- 10 on January the 15th 2014, correct?
- 11 A. That is correct.
- MR. KRAVIS: And I'm sorry, counsel,
- 13 before we continue with the examination, do
- 14 you mind collecting the exhibits that are in
- 15 front of the witness, since the reports
- themselves are hearsay?
- MR. MILLS: Sure.
- 18 MR. KRAVIS: Thank you.
- 19 BY MR. BINNALL:
- 20 Q. And the items actually received,
- 21 that was on January the 30th, 2014, correct?
- 22 A. I need my -- excuse me.
- Q. Would it refresh your recollection
- 24 to see the report?
- 25 A. Which exhibit?

- Q. Exhibit 2.
- 2 A. Date item received, is that what you
- 3 are referring to?
- 4 Q. Yes.
- 5 A. Yes, it says January 30th, 2014.
- 6 Q. Okay. You can go ahead and turn
- 7 that over if you don't mind.
- And, in fact, on the second page,
- 9 you were approached by Special Agent Les Straka
- 10 at some point regarding this work that you did?
- 11 A. Yes.
- 12 Q. And Special Agent Les Straka
- 13 approached you on June the 10th, 2014, correct?
- 14 A. If that is what my report says, yes.
- 15 Q. But you didn't actually prepare this
- 16 report until August 17th, 2015, correct?
- 17 A. That is correct.
- 18 Q. And Agent Yoo, how did you actually
- 19 received the laptop that you analyzed in
- 20 Exhibit 2?
- 21 A. I, the laptop was stored and secured
- 22 in our evidence control room. I went to the
- 23 evidence control room, checked it out and started
- 24 my analysis.
- Q. Okay. And when did you do that?

- 1 A. Again, I've got to take a look at my
- 2 notes. But, I believe the report of exam that
- 3 specifies the date as Item Received is the
- 4 correct date for when I checked out the evidence.
- 5 That date should correspond to the
- 6 date that is in my notes.
- 7 Q. Okay. But you don't have any direct
- 8 knowledge, sitting here today, of exactly when
- 9 you checked it out?
- 10 A. I believe that the Item Received
- 11 date should correspond to the exact date that it
- 12 was checked out.
- 13 Q. So you think you checked it out on
- 14 January the 30th, 2014.
- 15 What did you do with the computer
- 16 after you were done uploading it to the CAIR
- 17 System?
- 18 A. Again, at the end of my process, I
- 19 would then make sure and account for everything
- 20 that is in that particular container, or in this
- 21 case 1B item. Make sure that if it came with a
- 22 power cord, it goes with the laptop. And then
- 23 submit that whole package back into evidence
- 24 control.
- 25 O. You have no idea who handled the

- 1 computer before you checked it out, correct?
- 2 A. Based on the chain of custody, I
- 3 have a name, a date, and a time as to when it was
- 4 collected, who handled a particular device before
- 5 I received it.
- 6 Q. But you don't maintain that chain of
- 7 custody, correct?
- A. We maintain, we have copies of that
- 9 particular chain of custody.
- 10 Q. Okay. And, where is that chain of
- 11 custody report now?
- 12 A. I include a copy of that chain of
- 13 custody as part of my verification process, and
- 14 it is within my case notes.
- 15 Q. Do you know if that report was
- 16 produced by the Federal Bureau of Investigation
- 17 to the Public Integrity Section of the Department
- 18 of Justice?
- 19 A. What report are you referring to?
- Q. I'm sorry, the chain of custody
- 21 report.
- 22 A. Has it been given to the Department
- 23 of Justice? Is that what you are saying?
- Q. Correct.
- A. A copy of my notes was provided to

- 1 the Department of Justice. And within that
- 2 packet should be a copy, yes.
- 3 Q. Did anyone else other than you
- 4 handle the computer between the time that you
- 5 checked it out and checked it back in?
- 6 A. No. I am, once I take control of
- 7 the evidence, it is my responsibility to ensure,
- 8 again, that the integrity is not compromised and
- 9 a particular item is secured and no one handled
- 10 it outside from myself.
- 11 Q. Was the uploading of the computer,
- 12 was it done all in one day?
- 13 A. It can stay a couple of days based
- 14 on how large a file that you are trying to
- 15 upload. But that whole upload process, again,
- 16 involves what I specified before, an MD5
- 17 algorithm check at the end to ensure that what
- 18 you are uploading is consistent with the
- 19 beginning and the end.
- Q. All right. Now, the, when you say
- 21 that the MD5 algorithm is done at the end, is
- 22 that algorithm done on the bit-for-bit image that
- 23 is made or is it done on what is updated to the
- 24 CAIR System?
- 25 A. In this particular case, for

- 1 example, the laptop, the MD5 algorithm check was
- 2 done post exam.
- I'm going to refer you to my notes
- 4 and it does specify when that was done.
- 5 And any kind of uploading that was
- 6 done on the CAIR System again, was done at the
- 7 beginning -- I mean at the end of the process to
- 8 ensure that all files that were copied or
- 9 uploaded into the CAIR System was consistent from
- 10 the beginning of the process.
- 11 Q. All right. And I'm sorry, I just
- 12 want to make sure I have your answer right.
- So, it is done on the image before
- 14 uploading or after uploading?
- 15 A. In this particular case,
- 16 Mr. Kesari's laptop, a final MD5 algorithm was
- done at the end of my exam, okay. And then
- 18 during the CAIR process, I believe you will have
- 19 screen shots of that whole process where it
- 20 specifies that a certain number of files were
- 21 copied and that there were no mismatches.
- Q. Okay. How was the laptop computer
- 23 stored between the time that you checked it out
- 24 and you checked it back in?
- 25 A. Once the archival process is done,

- 1 and I am satisfied as to the integrity of my
- 2 copy, the working copy, is an exact duplicate,
- 3 the laptop is, again, if I have to take it apart,
- 4 I put it back together, put it back in its
- 5 package and secure it in a drawer, where it is
- 6 locked in my cube or in a very secure place where
- 7 I have only the access to.
- 8 Q. Okay. And, was that done
- 9 specifically that with Mr., the computer that you
- 10 analyzed in regards to Exhibit 2?
- 11 A. If you are referring to Mr. Kesari's
- 12 laptop, yes.
- Q. Well, you never took that laptop
- 14 from Mr. Kesari, correct?
- 15 A. No, I did not.
- 16 Q. Okay. So, the computer that you
- 17 actually analyzed. Correct?
- 18 A. Yes. In this particular case, the
- 19 laptop was not taken apart. Okay.
- The digital storage media was left
- 21 intact with the laptop.
- Q. Okay. And so, from the time that
- 23 you checked out Mr. Kesari's laptop until the
- 24 time you checked it back in with evidence, were
- 25 you with that computer 24/7?

- 1 A. Physically, no.
- 2 O. Okay. When you weren't with the
- 3 laptop, how was that computer stored?
- 4 A. Again, it is placed in a secure
- 5 location, which is my whole office space. And
- 6 within that my cubical, which has locked drawers,
- 7 where I can put that particular laptop and lock
- 8 it overnight.
- 9 Q. And, did you specifically put, do
- 10 you remember putting Mr. Kesari's laptop in a
- 11 locked drawer?
- 12 A. Yes.
- Q. Okay. And, you say you have a cube
- 14 and an office, is there other people within that
- 15 office environment?
- 16 A. Yes, in order to enter my office
- 17 space, which has controlled access, to, you have
- 18 to card key your way in, and that number of
- 19 people that has access to that space is extremely
- 20 limited. And then within that, my cubical and so
- 21 forth.
- Q. Okay. And who has a key to the
- 23 drawer that Mr. Kesari's laptop was stored in?
- A. Just me.
- 25 Q. All right.

- 1 Now, as far as the cell phone with
- 2 the, that you identified earlier with the serial
- 3 number Charlie 02 Juliet Golf 3 November 6 Delta
- 4 Kilo Quebec 2. Do you remember talking about
- 5 that cellphone?
- 6 A. Yes.
- 7 Q. Okay. I'm very sorry. I read off
- 8 the wrong number. It is actually, I believe,
- 9 Charlie 39 Hotel Lima 2 X-Ray November Delta
- 10 Tango Charlie 1. Does that sound right?
- 11 A. Yes.
- 12 Q. Okay. Do I understand that you did
- 13 not create an image of that cellphone?
- 14 A. That is correct. A physical image
- 15 was not obtained.
- 16 Q. Okay. Did you check out that device
- 17 also on January 30, 2014?
- 18 A. Can I --
- 19 Q. Yes, to refresh your recollection,
- 20 please look at the first page of Government's
- 21 Exhibit 2.
- 22 A. January is the item receive date,
- 23 yes.
- Q. Is it normal to go almost nineteen
- 25 months between receiving an item and creating

- 1 your report?
- 2 A. No. Not really.
- 3 Q. Okay. Was the cell phone stored in
- 4 the same manner that the laptop was stored when
- 5 you were not with the cell phone after checking
- 6 it out?
- 7 A. Yes, I mean, as part of best
- 8 practices in my field, we are trained from the
- 9 very beginning that integrity of the evidence is
- 10 number one priority and you take certain measures
- 11 to uphold that philosophy throughout the whole
- 12 exam process.
- 13 Q. Okay. And do you specifically
- 14 remember with that phone if you stored it the
- 15 same way?
- 16 A. Yes.
- 17 Q. Okay. Do I understand that you are
- 18 ill?
- 19 A. Yes, I am.
- Q. I am sorry to hear that. Can you
- 21 please tell me the nature of your illness?
- MR. KRAVIS: Objection, relevance.
- 23 THE WITNESS: Currently I am, I have
- a health condition that precludes me from
- actually travelling away from this area.

- 1 BY MR. BINNALL:
- Q. Okay. I'm sorry, and what is that
- 3 health condition.
- 4 MR. KRAVIS: Objection, relevance.
- 5 THE WITNESS: It is terminal.
- 6 Cancer.
- 7 BY MR. BINNALL:
- Q. I'm very sorry to hear that, sir.
- 9 Are you on any medications for that?
- 10 A. Yes. Currently. Excuse me.
- 11 Q. Yes, please take all of the time you
- 12 need.
- 13 A. All right.
- Q. And, are you currently on any
- 15 medications?
- 16 A. Other than chemo, no. Currently,
- 17 no.
- 18 Q. Okay. And, have you been on any
- 19 medication since you prepared this report?
- A. Again, when I, when that report was
- 21 created, I was undergoing chemotherapy, yes.
- Q. I'm very sorry. The, other than
- 23 chemotherapy, has there been anything else?
- A. No. But, if you want to clarify my
- 25 answer, I would be more than willing to and that

- 1 is when I did the exam for this particular case,
- 2 I was not under any chemo or any type of, I
- 3 guess, medication that you are referring to or
- 4 that you are alluding to.
- 5 Q. Okay. Thank you.
- 6 MR. BINNALL: All right, no further
- questions on behalf of Mr. Kesari.
- 8 CROSS-EXAMINATION
- 9 BY MR. HOWARD:
- 10 Q. Agent Yoo, it is very nice meeting
- 11 you. My name is Roscoe Howard, I represent
- 12 Mr. Benton, and if it is okay with you and
- 13 counsel, can we take a five minutes? I would
- 14 like to just confer and we will see if we have
- 15 any questions.
- MR. KRAVIS: Very well, thank you.
- 17 THE VIDEOGRAPHER: Going off the
- 18 record. The time now is 11:09.
- 19 (Recess taken -- 11:09 a.m.)
- 20 (After recess -- 11:21 a.m.)
- 21 THE VIDEOGRAPHER: We are now back
- on the record. The time now is 11:21.
- 23 BY MR. HOWARD:
- Q. All right. Agent Yoo, I have just a
- 25 few more questions for you.

Page 68 1 I'm going to--2 MR. HOWARD: What exhibit are we on? 3 MR. KRAVIS: 5. 4 BY MR. HOWARD: 5 I'm going to mark this as Exhibit 5. Ο. (Yoo Exhibit Number 5 6 marked for identification.) 7 BY MR. HOWARD: 8 9 Agent Yoo, will you take a look at O. that document, is that the chain of custody 10 document that you mentioned in regards to the 11 12 laptop computer that you identified earlier as serial number Charlie 02 Juliet Golf 3 November 6 13 Delta Kilo Quebec 2? 14 Are you referring to Item 1B44 with 15 16 that particular serial number? 17 Ο. I am. Yes, that would probably be 18 the more efficient way to recognize it. And, based on the exhibit that is 19 Α. presented in front of me, for Item 1B44, it looks 20 21 like our chain of custody. 22 And it looks like you checked that Ο. out on or about January 30, 2014, correct? 23 24 Α. Yes. 25 And you checked it back in on Ο.

Page 69 February the 7th, 2014? 1 2 Α. Yes. 3 Q. All right. And I'm going to mark this as Exhibit 6. 4 (Yoo Exhibit Number 6 5 marked for identification.) 6 7 BY MR. HOWARD: And is that the chain of custody 8 0. form for Item 1B43? 9 10 Α. Yes. 11 O. Okay. 12 Α. It looks like it is a continuation 13 page. Okay. And, have you seen, ever seen 14 Ο. a previous page for that document? 15 16 Α. Yes. 17 Q. Okay. Do you know where the 18 previous page of that document is? It is with the original evidence. 19 Α. Okay. And what day did you check 20 0. 21 out Item 1B43? 22 MR. KRAVIS: Objection, the chain of custody log is hearsay. Calls for hearsay. 23 24 Lack of foundation. 25 BY MR. HOWARD:

- 1 Q. Okay. Well, Agent Yoo, when did
- 2 you -- strike that.
- 3 Agent Yoo, when did you check out
- 4 Item 1B43?
- 5 A. According to this particular
- 6 document, which is a continuation page, it looks
- 7 like I checked the item out on May 20th, 2015.
- 8 MR. KRAVIS: Objection, calls for
- 9 hearsay, lack of foundation.
- 10 BY MR. HOWARD:
- 11 Q. Okay. Will you go ahead and turn
- 12 that page over, please.
- 13 Agent Yoo, when did you check out
- 14 Item 1B43?
- 15 MR. KRAVIS: Objection, vague as to
- when.
- 17 THE WITNESS: Based on what I just
- saw previously, May 2015.
- 19 BY MR. HOWARD:
- 20 Q. All right. And when did you check
- 21 it back in?
- MR. KRAVIS: Objection, vague as to
- when.
- 24 THE WITNESS: I did not note.
- 25 BY MR. HOWARD:

- 1 Q. Okay. Strike that. Did you ever
- 2 check that out and back in?
- 3 A. Yes, I did.
- 4 Q. Okay. When did you do that?
- 5 MR. KRAVIS: Objection, vague as to
- 6 when and lack of foundation as to whether he
- 7 checked it in more than once.
- 8 BY MR. HOWARD:
- 9 Q. All right. You can answer the
- 10 question.
- 11 A. I believe, if I, I believe that in
- 12 the first page, again this is a continuation
- 13 page, it documents when that was done.
- 14 Q. All right. You can go ahead and
- 15 turn that over, if it will refresh your
- 16 recollection.
- 17 A. Again.
- 18 Q. Does that refresh your recollection?
- 19 MR. KRAVIS: Objection, lack of
- 20 foundation. Refreshed recollection as to
- 21 what? The witness hasn't said he doesn't
- remember something that he needs to be
- 23 refreshed with.
- 24 BY MR. HOWARD:
- 25 O. Go ahead, sir.

- 1 A. It was checked out, checked back in
- 2 in May, I mean June of 2015.
- 3 MR. KRAVIS: Objection, lack of
- 4 foundation. Calls for hearsay. The chain of
- 5 custody log is hearsay.
- 6 BY MR. HOWARD:
- 7 Q. What day in June.
- 8 MR. KRAVIS: Just same objection.
- 9 BY MR. HOWARD:
- 10 O. Go ahead.
- 11 A. June 5th, 2015.
- 12 Q. All right, sir. Had you ever
- 13 checked that item out prior to that?
- 14 A. Yes.
- 15 Q. Okay. To your knowledge, has the
- 16 chain of custody form been produced from the FBI
- 17 to the Public Integrity Section of the Department
- 18 of Justice that shows when you had previously
- 19 checked that out or not?
- 20 MR. KRAVIS: Objection. Lack of
- 21 foundation. You can answer if you know.
- 22 THE WITNESS: As I stated before, a
- copy of my cart exam notes was provided and
- within this package this continuation page
- was provided.

- 1 The only reason this continuation
- 2 page was in this notes and not the first page
- 3 is just to note the final disposition of that
- 4 particular 1B item number.
- 5 BY MR. HOWARD:
- 6 Q. Okay. But my question was very
- 7 specifically, do you know if any previous pages
- 8 of the chain of custody form for 1B43 were ever
- 9 given by the FBI to the Public Integrity Section
- 10 of the Department of Justice?
- 11 MR. KRAVIS: Same objection.
- 12 THE WITNESS: I have no knowledge of
- 13 that.
- 14 BY MR. HOWARD:
- 15 Q. Okay. And you don't have a copy of
- 16 the previous chain of custody pages with you here
- 17 today, correct?
- 18 A. That is correct.
- 19 MR. HOWARD: All right. That is all
- of the questions I have.
- 21 CROSS-EXAMINATION
- 22 BY MS. SINFELT:
- Q. Good morning, Agent Yoo. My name is
- 24 Meena Sinfelt and I am one of the attorneys for
- 25 defendant Jesse Benton. I just have a few

- 1 questions for you, okay.
- I believe earlier in your testimony
- 3 you referred to MD5 which is known as a
- 4 cryptographic hash algorithm; is that correct?
- 5 A. It is a mathematical algorithm,
- 6 that's correct.
- 7 Q. Okay. And that is used to make sure
- 8 that content is not changed while you are doing
- 9 your analysis; is that correct?
- 10 A. It is a check, yes.
- 11 O. Okay. But isn't it true that MD5
- 12 cannot tell whether the content was altered
- 13 before you start your analysis; is that correct?
- 14 A. That is correct.
- 15 Q. Okay. Thank you, no further
- 16 questions.
- 17 MR. KRAVIS: Special Agent Yoo, I
- 18 have just a few final questions for you.
- 19 REDIRECT EXAMINATION
- 20 BY MR. KRAVIS:
- Q. First, you were asked on
- 22 cross-examination about your illness. Do you
- 23 remember those questions?
- 24 A. Yes.
- Q. During the time that you examined

- 1 the computer and the phone that we have been
- 2 talking about here today, were you still able to
- 3 do your job as an FBI forensic examiner
- 4 notwithstanding your illness?
- 5 A. Yes.
- 6 Q. And, in fact, you continue to work
- 7 as an FBI forensic examiner today?
- 8 A. Yes.
- 9 Q. You were asked a few questions on
- 10 cross-examination about the location of
- 11 particular e-mails within the computer. Do you
- 12 remember those questions?
- 13 A. Yes.
- 14 Q. Is it your job as an FBI Forensic
- 15 Examiner to look through the devices that you
- 16 examined to find particular e-mails?
- 17 A. No. It is not my responsibility.
- 18 Q. What is your job as an FBI Forensic
- 19 Examiner with respect to these items?
- 20 A. My responsibility is, again, to make
- 21 sure that the integrity of the evidence is
- 22 maintained throughout the whole process and
- 23 parsing through the material for case agent
- 24 review.
- I am not responsible for determining

- 1 what is pertinent, what is not pertinent. Unless
- 2 it is specifically requested by the case agent.
- 3 Q. You were also asked on
- 4 cross-examination a few questions about the
- 5 timing of your work in this case. Do you
- 6 remember those questions?
- 7 A. Yes.
- Q. If you remember, when was it that
- 9 you were first asked to work on the items of
- 10 evidence that we have been talking about here
- 11 today? The cell phone and the computer?
- 12 A. That date would correspond with the
- 13 date that I checked out the evidence or a couple
- 14 of days prior to.
- 15 O. And, would that date be reflected on
- 16 the report that you prepared?
- 17 A. Yes, to some degree.
- The date that you see when items
- 19 were received, is the date that I would actually
- 20 physically check out the evidence, out of the
- 21 evidence control to start my analysis.
- Q. Do you remember, as you sit here
- 23 today, what that date was for the cell phone and
- 24 computer we have been talking about today?
- 25 A. Not off -- directly off of my head,

Case 4:15-cr-00103-JAJ-HCA Document 590-1 Filed 05/23/16 Page 77 of 95 Page 77 1 no. 2 Would the report refresh your Ο. 3 recollection? 4 Α. Yes. 5 I'm going to show you what has been marked for identification as Government's 6 7 Exhibit 2. 8 I want you to look at that report and don't say anything, when you finish looking 9 at the report, go ahead and look up at me. 10 All right. Okay. 11 Α. 12 O. Okay. And now I'm taking back to you Government's Exhibit Number 2. Does that 13 refresh your recollection as to when you received 14 the items and began your work in this case? 15 16 Α. Yes, I did. 17 0. And when was that? 18 January 30th, 2014. Α. 19 0. And how soon after you received the 20 items from evidence control, January 30th, 2014, how soon after that did you start your work in 21 22 this case?

Q. When you say shortly thereafter, do

23

24

Α.

thereafter.

Pretty quickly. But shortly

- 1 you mean a matter of days, weeks, months, just
- 2 ballpark.
- 3 A. Probably that day.
- 4 Q. And you were asked about the date on
- 5 your report, which is August 17th of 2015. Why
- 6 is it that if you began your work in January of
- 7 2014, the date of the report is actually
- 8 August of 2015. Can you explain that?
- 9 A. Due to logistical reasons, the
- 10 review process can be quite lengthy. So, the
- 11 case agent, based on his or her case load may
- 12 take a long time to review the material that I
- 13 provide on the CAIR System.
- 14 And, that could be one of the
- 15 reasons. Another reason could be that there
- 16 might be technical issues that I have to overcome
- 17 to ensure, again, that what I am providing to the
- 18 case agent is not compromised in any way, or is
- 19 in a format that is readable to the end user.
- 20 Q. Finally, you were asked some
- 21 questions on cross-examination about the FBI not
- 22 taking the effort to decrypt the e-mails in the
- 23 cell phone. Do you remember those questions?
- 24 A. Yes.
- Q. Now, Special Agent Yoo, are there

- 1 out there in the world more aggressive search
- 2 techniques that you could have used on the
- 3 cellphone in order to potentially generate more
- 4 material?
- 5 A. Yes.
- 6 MR. HOWARD: Objection. Objection.
- 7 MR. KRAVIS: What is the basis?
- 8 MS. SINFELT: Foundation.
- 9 MR. HOWARD: Foundation, irrelevant.
- 10 BY MR. KRAVIS:
- 11 Q. Special Agent Yoo, are you a
- 12 certified digital forensic examiner?
- 13 A. Yes.
- Q. Do you have personal experience with
- 15 the various tools that can be used to examine a
- 16 cell phone.
- 17 A. Yes.
- 18 Q. Based on your personal experience
- 19 with those kind of tools, are there software
- 20 tools available, are there search tools available
- 21 that you could have used to potentially get more
- 22 information off the cell phone?
- MR. HOWARD: Objection, irrelevant.
- 24 BY MR. KRAVIS:
- 25 O. You can answer.

- 1 A. Yes.
- Q. Why didn't you use those tools in
- 3 this case?
- 4 MR. HOWARD: Objection, irrelevant.
- 5 BY MR. KRAVIS:
- 6 Q. You can answer.
- 7 A. Because I did not want to introduce
- 8 any artifacts where I am compromising the
- 9 integrity of that particular digital storage
- 10 media evidence.
- MR. KRAVIS: Thank you, I have no
- 12 further questions.
- 13 FURTHER CROSS-EXAMINATION
- 14 BY MR. MILLS:
- 15 Q. I just have a couple of follow up
- 16 questions on Exhibit Number 6.
- 17 Agent Yoo, could you turn Exhibit
- 18 Number 6 over.
- 19 Exhibit Number 6 is a chain of
- 20 custody report; is that correct?
- 21 A. It is a chain of custody, yes.
- Q. And it is on a preprinted FBI form,
- 23 correct?
- 24 A. Can you clarify preprinted?
- Q. Okay. It is on a form, correct?

- 1 A. Yes.
- 2 O. And is that a form that you are
- 3 provided with at work by the FBI?
- 4 A. Yes.
- 5 Q. And isn't it true it is your job to
- 6 keep track of the chain of custody evidence that
- 7 you review, correct?
- 8 A. Yes.
- 9 Q. Okay. And it is your job to make a
- 10 record of the evidence that you review; is that
- 11 right?
- 12 A. Yes.
- 13 O. And Exhibit 6 is an example of a
- 14 record that you kept in the normal course of your
- 15 regularly conducted business practices of the
- 16 evidence you reviewed, right?
- 17 A. The official record is the one that
- 18 is maintained with the evidence. This is just a
- 19 reflection of that particular document.
- 20 Q. Okay. And this is a record that you
- 21 kept, that is your handwriting on Exhibit 6,
- 22 correct?
- 23 A. Yes.
- Q. Okay. And did you make the entry at
- or near the time you put the device back in

- 1 storage?
- 2 A. That is the final disposition or the
- 3 last time I handled the evidence.
- 4 Q. Okay. And, Exhibit 6 is something
- 5 that you gave to the Department of Justice as a
- 6 record of the chain of custody in this case,
- 7 correct?
- 8 A. As part of my case notes.
- 9 O. Okay. Move to admit Exhibit 6.
- 10 MR. KRAVIS: Objection on the ground
- 11 that the witness has already stated that
- 12 Exhibit 6 is not the complete chain of
- 13 custody form for the item of evidence at
- issue here.
- 15 MR. MILLS: Okay. Nothing further
- 16 for me.
- 17 FURTHER REDIRECT EXAMINATION
- 18 BY MR. KRAVIS:
- 19 Q. I have a few additional questions.
- 20 Special Agent Yoo, I'm going to show you what is
- 21 marked as exhibit, it doesn't say whose, but
- 22 Exhibit 5. But, do you recognize Exhibit 5?
- 23 A. Yes.
- Q. What is Exhibit 5?
- 25 A. Exhibit 5 is the FBI Evidence Chain

- 1 of Custody. It is the very first page.
- 2 Q. And, is this the same kind of
- 3 document that you were just talking about with
- 4 respect to Exhibit 6?
- 5 A. Yes.
- 6 Q. Same in terms of how it is prepared,
- 7 and so on and so forth?
- 8 A. That is correct.
- 9 Q. Okay. And, just for the record,
- 10 what is the 1B item number that Exhibit 5 is the
- 11 chain of custody for?
- 12 A. 1B44.
- Q. And, do you remember which item 1B44
- 14 is?
- 15 A. I believe that is the laptop. 1B44
- 16 O. You answered with some hesitation in
- 17 your voice. Are you sure or not sure?
- 18 A. I'm not sure. I could look on my --
- 19 Q. Would your report refresh your
- 20 recollection?
- 21 A. Yes.
- Q. Okay. I'm going to show you again,
- 23 Special Agent Yoo, Government's Exhibit 2, direct
- 24 your attention to the middle of the page. I want
- 25 you to read Government's Exhibit 2. See if it

Page 84 refreshes your recollection as to which item is 1 2 1B44. Don't say anything. Look up at me when 3 you've had a chance. Does that refresh your recollection 4 as to which item is 1B44 as to the item to which 5 Exhibit 5 corresponds? 6 7 Α. Yes. And what is it? 8 Q. 9 Α. It is the Apple laptop. 10 MR. KRAVIS: Thank you, I have no further questions. 11 12 THE VIDEOGRAPHER: Going off the record, the time now is 11:36. 13 14 (Whereupon, signature having been waived, the deposition concluded at 11:36 a.m.) 15 16 17 18 19 20 21 22 23 24 25

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Page 85
 1
               CERTIFICATE OF COURT REPORTER
 2
     UNITED STATES OF AMERICA
 3
     DISTRICT OF COLUMBIA
             I, LORI J. GOODIN, the reporter before
 4
     whom the foregoing deposition was taken, do
 5
     hereby certify that the witness whose testimony
 6
 7
     appears in the foregoing deposition was sworn by
     me; that the testimony of said witness was taken
 8
     by me in machine shorthand and thereafter
 9
     transcribed by computer-aided transcription; that
10
     said deposition is a true record of the testimony
11
12
     given by said witness; that I am neither counsel
     for, related to, nor employed by any of the
13
     parties to the action in which this deposition
14
15
     was taken; and, further, that I am not a relative
16
     or employee of any attorney or counsel employed by
17
     the parties hereto, or financially or otherwise
     interested in the outcome of this action.
18
19
20
21
                          LORI J. GOODIN
22
                          Notary Public in and for the
                          District of Columbia
23
24
     My Commission expires:
25
     May 14, 2016
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A	35:9 36:6,15,24	APPEARANCES	34:6 35:11 79:20	73:25
<b>able</b> 36:22 37:1,2,6	79:1	3:1 4:1 5:1	79:20	best 13:17,22 20:7
37:12 38:21 50:13	ago 24:1	appears 85:7	<b>Avenue</b> 2:6 3:7	23:2,18,20 34:18
51:10 75:2	ahead 21:20 35:21	<b>Apple</b> 13:7 33:17	4:17 8:10	44:20 46:15 65:7
Absolutely 52:21	42:16 57:6 70:11	42:1,10,22 43:1,7	<b>a.m</b> 2:5 67:19,20	<b>better</b> 32:9 36:20
academic 17:12,15	71:14,25 72:10	43:14,17,20,23	84:15	<b>Binnall</b> 4:4,5 5:9
17:25	77:10	44:2,5,9,13,15,18		6:7 9:9,9 35:19
access 34:8 36:3	Alexandria 3:18	44:23 45:8 49:5	<u>B</u>	39:5 56:2,4,19
51:10 62:7 63:17	4:8	50:21 52:1 84:9	back 24:5 28:21	66:1,7 67:6
63:19	algorithm 22:5,7	<b>approach</b> 34:4 35:2	46:19 58:23 60:5	biology 15:7
accessing 49:11	22:13,24 24:6	35:7,8,22	61:24 62:4,4,24	<b>bit-by-bit</b> 23:9,12
account 20:23 21:4	29:11 60:17,21,22	approached 57:9	67:21 68:25 70:21	23:21 24:4,6,8,14
58:19	61:1,16 74:4,5	57:13	71:2 72:1 77:12	24:15,19 29:10
accountability 23:6	<b>allow</b> 11:13	approximately	81:25	bit-for-bit 34:1
49:18	alluding 67:4	8:12 10:17 11:3	ballpark 78:2	60:22
accurate 31:9,12	altered 74:12	11:25 14:3	Barnes 2:6 4:16	<b>bold</b> 16:19
33:6	<b>America</b> 1:4 8:5	archival 29:2,2	9:13,17	bookmark 26:10
accurately 27:11	85:2	61:25	based 40:19 44:25	bottom 17:7
27:15	<b>analysis</b> 10:22,23	archive 30:8	44:25 45:5 53:22	Branch 5:6
action 85:14,18	11:7 13:24 19:25	area 12:12 48:2	59:2 60:13 68:19	<b>Brief</b> 55:19
adding 35:17	21:22 23:1 24:10	65:25	70:17 78:11 79:18	briefly 19:14
addition 32:17	24:17 25:10 26:12	<b>artifacts</b> 20:8 34:22	baseline 20:17	Brooks 9:6
additional 13:20	26:17 27:3 29:15	36:10 80:8	basically 22:8	<b>Bureau</b> 10:13,15
82:19	30:3 32:2,14,19	asked 26:16 27:1	51:14 54:22	10:19 59:16
additions 20:10	33:23 34:16,22	32:18,23 33:1	basis 12:18 13:19	business 81:15
35:13	36:4,17 53:20	43:16 46:21 74:21	22:5 79:7	B-I-N-N-A-L-L
Administrator 2:10	54:1,2 57:24 74:9	75:9 76:3,9 78:4	began 77:15 78:6	9:10
<b>admit</b> 82:9	74:13 76:21	78:20	beginning 21:4	<u> </u>
agent 9:5 10:12,15	analyst 15:25	asking 53:25	22:17 23:7 24:12	
10:16,21 14:22	analytical 15:19	assigned 10:20	29:21 60:19 61:7	C 4:14 5:5
15:4 16:9 19:15	analyze 19:17	assignment 10:18	61:10 65:9	CAIR 25:13,14,16
19:21 24:24 25:8	26:21 30:9 32:23	assist 40:15	<b>behalf</b> 9:2,10 67:7	25:17 26:1,4,5
25:11,15,18 26:6	33:1 55:12	assisted 40:16	believe 13:11 15:23	29:23 30:4,8,12
26:8 28:20 29:6	analyzed 14:4,9	associated 23:5	40:6 45:9,24 46:5	30:13 31:3 32:3
30:5,10,15 31:23	30:2 33:16 38:16	30:15 54:18	46:16 47:7 48:22	32:12,15 37:8
32:5 33:19 34:11	57:19 62:10,17	association 8:17	50:11,19,19,25	50:4 58:16 60:24
35:3 37:15 39:8	analyzing 20:11,20	attached 16:22	52:25 53:4 54:23	61:6,9,18 78:13
39:12 50:4,7 56:3	36:15	attention 31:5	55:1 58:2,10	call 13:2 16:4 20:21
57:9,12,18 67:10	annual 13:19	33:14 83:24	61:18 64:8 71:11 71:11 74:2 83:15	23:9 53:1 called 9:25 17:8
67:24 68:9 70:1,3	answer 42:7,16	attorney 85:16		25:13
70:13 73:23 74:17	46:4,13 49:17	attorneys 73:24	<b>belong</b> 45:18,23,25 47:16,20	calls 41:5,14 42:2
75:23 76:2 78:11	55:24 61:12 66:25	August 39:23 40:19	belonged 55:13,22	45:20 46:2,9
78:18,25 79:11	71:9 72:21 79:25	46:25 47:1 56:7	belonging 38:15	47:18 55:15 69:23
80:17 82:20 83:23	80:6	57:16 78:5,8	belongs 46:5	70:8 72:4
agent's 32:16	answered 83:16	author 17:11,15	<b>Benton</b> 1:7 4:13 8:5	Cancer 66:6
aggressive 35:2,7,8	answering 42:9,12	18:9,14	9:14,16 67:12	capable 48:20
	<b>apart</b> 62:3,19	available 25:11	7.17,10 07.12	Capabic 40.20

,	Ī	Ī	Ī	ı
card 63:18	13:6 14:13	closely 45:7	consistent 22:18	41:24 43:14 44:5
<b>career</b> 14:4,9	certified 2:9,9	<b>CLR</b> 1:24	24:12 29:20 60:18	45:10,11,18 46:22
Carlos 5:11 8:13	11:15,19 12:8	<b>collect</b> 31:24 33:20	61:9	47:10,11,16 48:17
cart 72:23	13:1,5,18 14:16	collected 59:4	contain 36:12	49:1,6,7,9,14 50:7
case 9:7,8 21:23	79:12	collecting 56:14	contained 48:16	50:9 51:5,13,17
24:24,24 25:8,11	certify 85:6	Columbia 2:12	container 58:20	51:20,21,23,24
25:15,18 26:15,18	<b>chain</b> 7:4,6 59:2,6,9	85:3,23	containing 6:16,18	52:2,5,9,11,12,18
26:22 28:7,9 29:4	59:10,12,20 68:10	commencing 2:5	contains 50:12	53:11 55:6 56:7
29:6,15,19 30:3,5	68:21 69:8,22	Commission 85:24	contemporaneou	56:10,11,21 57:13
30:9,10,15,16,17	72:4,16 73:8,16	<b>common</b> 35:24	27:19	57:16,17 58:4
30:21,21 31:2,2,8	80:19,21 81:6	compare 22:16	<b>content</b> 74:8,12	59:1,7,24 62:14
31:12,15,17,20,21	82:6,12,25 83:11	compared 24:9	<b>contents</b> 6:1 34:2	62:17 64:14 68:23
32:2,5,16,19	<b>chance</b> 38:9 84:3	complete 82:12	38:10,19 42:4	73:17,18 74:4,6,9
33:11,16,24 34:11	changed 74:8	completed 30:3	continuation 69:12	74:13,14 80:20,23
34:17 35:1,3 36:5	changes 22:19	compromise 23:19	70:6 71:12 72:24	80:25 81:7,22
37:14 38:17 42:22	35:23 36:2,10	compromised 60:8	73:1	82:7 83:8
43:24 50:4,7	changing 20:9	78:18	continue 56:13	correspond 58:5,11
54:24 58:21 59:14	34:24	compromising 80:8	75:6	76:12
60:25 61:15 62:18	charged 20:15	computation 22:9	CONTINUED 4:1	corresponds 84:6
67:1 75:23 76:2,5	<b>Charlie</b> 64:3,9,10	computer 10:21	7:1	<b>counsel</b> 7:9 8:19
77:15,22 78:11,11	68:13	15:24 18:10,15,18	CONTINUES 5:1	15:5 27:24 30:25
78:18 80:3 82:6,8	check 24:2 60:17	18:22 19:2 20:1	<b>control</b> 57:22,23	37:19 56:12 67:13
cases 31:13	61:1 64:16 69:20	26:18,22,25 27:4	58:24 60:6 76:21	85:12,16
categories 24:23	70:3,13,20 71:2	27:10,19,20 28:9	77:20	<b>count</b> 14:10
categorize 30:9	74:10 76:20	28:17,18,24 29:15	controlled 63:17	<b>couple</b> 60:13 76:13
<b>CD</b> 6:16 38:6,10,13	checked 12:14	29:19 30:2 32:2	convened 2:4	80:15
38:20,20,25 39:2	57:23 58:4,9,12	32:12,18 33:10,22	conversion 53:1,6	course 15:1 81:14
cell 6:17 13:5 14:3	58:13 59:1 60:5,5	37:8 38:7 49:13	<b>copied</b> 61:8,21	<b>court</b> 1:1 8:7,16
32:19,22 33:1,6	61:23,24 62:23,24	50:10,17 53:21	<b>copies</b> 59:8	9:21 85:1
33:16,23 34:1,2,3	68:22,25 70:7	58:15 59:1 60:4	<b>copy</b> 23:10,12,13	create 40:17 64:13
34:16,25 36:5	71:7 72:1,1,13,19	60:11 61:22 62:9	23:16,21,24 24:4	created 24:3 66:21
37:13,16 64:1	76:13	62:16,25 63:3	24:7,8,15,15,19	creating 64:25
65:3,5 76:11,23	checking 65:5	68:12 75:1,11	25:3 29:9 34:1	Crimes 5:5
78:23 79:16,22	checks 22:6,7,22	76:11,24	40:11 47:7 59:12	<b>criminal</b> 1:6 3:6
<b>Cellebrite</b> 6:16	29:18,20	computers 14:8	59:25 60:2 62:2,2	5:6 8:8 19:18
38:4,14 50:12 55:11	chemist 15:22	computer-aided 85:10	72:23 73:15	Cross 6:6,7,8,9 cross-examination
	<b>chemistry</b> 15:13,19 17:16 18:6	concluded 84:15	cord 58:22 corner 31:6 39:2	39:10 56:1 67:8
<b>cellphone</b> 13:5 33:17 37:7 64:5	chemo 66:16 67:2	condition 65:24	correct 15:7,8,11	73:21 74:22 75:10
64:13 79:3	chemotherapy	66:3	15:14,17,20,23	76:4 78:21 80:13
certain 34:7 61:20	66:21,23	conducted 81:15	16:1,16,20,21,24	CRR 1:24
65:10	chose 36:14,23	confer 67:14	17:2,3,17,19,23	cryptographic 74:4
CERTIFICATE	clarify 49:15 66:24	confirmation 23:24	17:25 18:12,16,20	cube 62:6 63:13
85:1	80:24	confirmed 24:15	18:24 19:4,9	<b>cubical</b> 63:6,20
certification 11:19	clearly 24:1	connected 21:11	21:19 27:17 31:14	current 10:18
13:9,14 14:20	client 47:23 48:16	connection 42:21	36:19 38:8 39:20	currently 10:20
certifications 12:25	48:18 50:16 51:1	43:23 54:24	39:24 41:1,2,9,19	65:23 66:10,14,16
201 011100010115 12.25	10.10 20.10 21.1	13.23 5 1.2 1	37.21 11.1,2,7,17	05.25 00.10,11,10

12:6   13:11   16:24   16!24   17:1,4	
T7:1,4	
cursory 48:2         deletions 20:10         Director 5:5         discussion 55:19         23:22 24:11 29:9         31:19 19:15 75: 23:22 24:11 29:9           59:7,9,11,13,20         68:10,21 69:8,23         78:4,6         68:10,21 69:8,23         75:7,16,73:8,16         30:14 34:21 60:7         13:19 19:15 75: 20:11         13:19 19:15 75: 20:11         13:19 19:15 75: 20:11         60:17 61:8 78:17         75:7,15,19 79:1         examiner 10:21         11:1,3,5,6,15,20         13:19 19:15 75: 20:11         13:19 19:15 75: 20:11         13:19 19:15 75: 20:11         60:17 61:8 78:17         75:7,15,19 79:1         examiner 10:21         11:1,3,5,6,15,20         13:19 19:15 75: 20:11         13:19 19:15 75: 20:11         60:17 61:8 78:17         75:7,15,19 79:1         examining 20:15         20:23 21:12         21:18 22:1         examining 20:15         21:18 22:1         examiner 10:21         11:1,3,5,6,15,20         13:19 19:15 75: 20:1         entails 12:16         examining 20:15         20:23 21:15         22:11         20:23 21:15         21:18 22:1         examining 20:15         20:18 23:1         20:18 23:1         20:23 21:12         21:18 22:1         examiner 10:21         20:23 21:12         21:18 23:1         entitled 16:23         examiner 10:21         20:23 21:12 2:1         20:2	
custody 7:4,6 59:2 59:7,9,11,13,20         Dell 28:6 Delta 64:3,9 68:14 delve 48:1 53:16 Delta 64:3,9 68:14 delve 48:1 53:16 Department 3:5 80:20,21 81:6 82:6,13 83:1,11 CO2JG3N6DKQ2 28:19 C39HL2XNDTC1 33:18         delve 48:1 53:16 Department 3:5 Sp:17,22 60:1 District 1:1,2 2:11 8:7,7 85:3,23 depends 11:23 deposition 1:13 2:3 deposition 1:13 2:3 deposition 1:13 2:3 deposition 1:13 2:3 described 22:23	,
Delta 64:3,9 68:14   delve 48:1 53:16   Department 3:5   Sp:17,22 60:1   Sp:	•
68:10,21 69:8,23         delve 48:1 53:16         disposition 73:3         60:17 61:8 78:17         75:7,15,19 79:1           72:5,16 73:8,16         B0:20,21 81:6         S9:17,22 60:1         82:6         S2:6,13 83:1,11         72:17 73:10 82:5         District 1:1,2 2:11         enter 63:16         example 11:10 12         21:18 22:1         example 11:10 12         20:23 21:1 22:1         example 11:10 12         20:23 21:1 22:1         20:23 21:1 22:1         example 11:10 12         20:23 21:1 22:1         20:23 21:1 22:1         example 11:10 12         20:23 21:1 22:1         2	•
72:5,16 73:8,16         Department 3:5         82:2         mentalls 12:16         examining 20:15           80:20,21 81:6         59:17,22 60:1         District 1:1,2 2:11         8:7,7 85:3,23         entitled 16:23         example 11:10 12           C2JG3N6DKQ2         depends 11:23         depends 11:23         deposition 1:13 2:3         Division 3:6 5:7         decoument 6:18 7:4         entitled 16:23         example 11:10 12           C39HL2XNDTC1         8:3,9 9:3 38:22         7:6 16:23 27:18         ESQUIRE 3:4,14         61:1 81:13           Balmut 5:9         data 34:24 49:25         described 22:23         documents 24:23         20:9,14 21:18         example 11:10 12           Dept 5:6         described 22:23         25:23,24 71:13         23:11,7,18,20,23         exchanges 54:18           data 34:24 49:25         26:18         25:23,24 71:13         23:11,7,18,20,23         20:9,14 21:18         exchanges 54:18           date 13:15 39:22         40:17,19,24 41:11         6:15,23 7:3         determined 36:11         33:10,23 42:22         31:13 39:4 57:22         28:1,5,22 30:25           58:3,4,5,6,11,11         59:3 64:22 76:12         59:3 64:22 76:12         6evelopments         13:16         63:23         6evice 20:1 21:10         60:7 62:24 65:9         37:19,21,25 38:           78:4,7         24:16 34:14	
80:20,21 81:6         59:17,22 60:1         District 1:1,2 2:11         enter 63:16         21:18 22:1         example 11:10 12           C02JG3N6DKQ2         depends 11:23         deposition 1:13 2:3         Division 3:6 5:7         entry 81:24         20:23 21:1 22:1         example 11:10 12           28:19         B:3,9 9:3 38:22         B:3,9 9:3 38:22         Cic 16:23 27:18         ESQUIRE 3:4,14         6:11 81:13         exams 12:9 14:1           33:18         Best 14         54:4 68:10,11         69:15,18 70:6         81:19 83:3         establishing 42:5         excuse 56:22 66:1         excus	, ,
82:6,13 83:1,11       72:17 73:10 82:5       8:7,7 85:3,23       entitled 16:23       example 11:10 12         28:19       deposition 1:13 2:3       3:3,9 9:3 38:22       7:6 16:23 27:18       entry 81:24       20:23 21:1 22:1         33:18       84:15 85:5,7,11       54:4 68:10,11       4:4,14,15       exams 12:9 14:1         50       4 daily 12:18       4 described 22:23       26:18       25:23,24 71:13       20:9,14 21:18       exchanges 54:18         61:1, 13:15 39:22       40:17,19,24 41:11       41:21 48:5,9       42:2 25:4 30:9       16:14,22 27:24         54:19 56:5 57:2       55:3 64:22 76:12       4evice 20:1 21:10       63:23       57:23 58:4,23       31:12 39:4 57:22       28:1,5,22 30:25         76:13,15,18,19,23       78:4,7       22:25 23:5,17       4evice 20:1 21:10       63:23       4rive 21:1,3       80:10 81:6,10,16       40:18 43:3 48:8         44:4,14,15       55:2       exchanges 54:18       exchanges 54:18       exchanges 54:18         60:15,23 7:3       33:10,23 42:22       31:13 39:4 57:22       28:1,5,22 30:25         54:19 56:5 57:2       56:5 57:2       56:25 57:2       57:23 58:4,23       31:24 33:5,21         59:3 64:22 76:12       4erbit 53:11,15       60:7 62:24 65:9       37:19,21,25 38:         78:4,7       4erbit 52	, , , , , , , , , , , , , , , , , , , ,
C02JG3N6DKQ2         depends 11:23 deposition 1:13 2:3 deposition 1:13 2:3 site         Division 3:6 5:7 document 6:18 7:4 role followed follo	*
C39HL2XNDTC1	
C39HL2XNDTC1         8:3,9 9:3 38:22         7:6 16:23 27:18         ESQUIRE 3:4,14         61:1 81:13           33:18         84:15 85:5,7,11         85:14         69:15,18 70:6         establishing 42:5         exchanges 54:18           Dalmut 5:9         described 22:23         documents 24:23         20:9,14 21:18         excuse 56:22 66:1           Dalmut 5:9         data 34:24 49:25         described 22:23         doing 27:20 31:16         23:11,17,18,20,23         excluse 56:22 66:1           date 13:15 39:22         do:15,23 7:3         doing 27:20 31:16         24:2 25:4 30:9         16:14,22 27:24,           4:121 48:5,9         determined 36:11         determining 75:25         draft 53:11,15         60:7 62:24 65:9         37:19,21,25 38:           58:3,4,5,6,11,11         59:3 64:22 76:12         76:13,15,18,19,23         13:16         device 20:1 21:10         21:11,13,15,21         drawer 62:5 63:11         69:19 75:21 76:10         38:6 39:4,14,15           78:4,7         dated 40:25 46:25         dated 40:25 46:25         devices 21:7,9,25         duly 10:1         81:18 82:3,13,25         46:20,22 47:2,8           dates 54:5         day 60:12 69:20         46:16 81:25         duly 10:1         40:24 47:8:9         47:5 48:5,6,19 69:4,5           72:7 78:3         34:14 45:17,22         34:14 45:17,22	C02JG3N6DKQ2
Satist	
D         85:14         69:15,18 70:6         establishing 42:5         55:2           Dalmut 5:9         data 34:24 49:25         described 22:23         documents 24:23         20:9,14 21:18         excuse 56:22 66:1           DESCRIPTION date 13:15 39:22         6:15,23 7:3         doing 27:20 31:16         24:2 25:4 30:9         16:14,22 27:24, 30:25           40:17,19,24 41:11         determined 36:11         determining 75:25         draft 53:11,15         60:7 62:24 65:9         31:24 33:5,21           54:19 56:5 57:2         58:3,4,5,6,11,11         13:16         63:23         63:23         69:19 75:21 76:10         38:6 39:4,14,15           76:13,15,18,19,23         78:4,7         22:25 23:5,17         drive 21:1,3         81:18 82:3,13,25         46:20,22 47:2,8           dated 40:25 46:25         46:16 81:25         duly 10:1         20:4,6 25:1 26:7,9         56:25 57:1,20           dates 54:5         40:10 13:16         40:10 43:14 47:24         40:24 47:25         40:10 43:14 47:24         40:34:4 45:17,22         40:10 43:16 62:2         40:10 43:16 58:11         47:77,13 80:16,1	
D         daily 12:18         Dept 5:6         81:19 83:3         evidence 19:17,20         exchanges 54:18           Dalmut 5:9         data 34:24 49:25         date 13:15 39:22         DESCRIPTION         doing 27:20 31:16         23:11,17,18,20,23         exchanges 54:18         excuse 56:22 66:1           date 13:15 39:22         DESCRIPTION         doing 27:20 31:16         24:2 25:4 30:9         16:14,22 27:24,         exhibit 16:3,46,9	33:18
daily 12:18         described 22:23         documents 24:23         20:9,14 21:18         excuse 56:22 66:18           Dalmut 5:9         data 34:24 49:25         date 13:15 39:22         doing 27:20 31:16         23:11,17,18,20,23         exhibit 16:3,4,6,9           determined 36:11         determined 36:11         determining 75:25         determining 75:25         draft 53:11,15         60:7 62:24 65:9         37:19,21,25 38:           58:3,4,5,6,11,11         59:3 64:22 76:12         device 20:1 21:10         drawer 62:5 63:11         63:23         69:19 75:21 76:10         38:6 39:4,14,15           78:4,7         dated 40:25 46:25         dated 40:25 46:25         dexice 20:1 21:10         drawers 63:6         80:10 81:6,10,16         40:18 43:3 44:8           78:4,7         dated 40:25 46:25         dexice 21:7,9,25         duly 10:1         due 34:4 78:9         20:4,6 25:1 26:7,9         56:25 57:1,20           day 60:12 69:20         72:7 78:3         devices 21:7,9,25         duplicate 23:10         24:3,16 62:2         24:4,16 58:11         77:7,13 80:16,1	
Dalmut 5:9         26:18         25:23,24 71:13         23:11,17,18,20,23         exhibit 16:3,4,6,9           data 34:24 49:25         DESCRIPTION         6:15,23 7:3         doing 27:20 31:16         24:2 25:4 30:9         16:14,22 27:24,           40:17,19,24 41:11         determined 36:11         determined 36:11         determining 75:25         draft 53:11,15         60:7 62:24 65:9         37:19,21,25 38:           54:19 56:5 57:2         device 20:1 21:10         drawer 62:5 63:11         63:23         69:19 75:21 76:10         38:6 39:4,14,15           76:13,15,18,19,23         device 20:1 21:10         drawers 63:6         drive 21:1,3         81:18 82:3,13,25         46:20,22 47:2,8           44:25 4dee 40:25 46:25         44:16 34:14 47:24         44:24         47:15 48:5,8 56           dates 54:5         59:4 64:16 81:25         duly 10:1         30:6         exact 23:9,13,16,24         62:10 64:21 68:           40:10 42:17,78:3         42:7,78:3         44:14 45:17,22         42:3,16 62:2         24:4,16 58:11         77:7,13 80:16,1	
data 34:24 49:25         DESCRIPTION         doing 27:20 31:16         24:2 25:4 30:9         16:14,22 27:24, 27:24, 28:1,5,22 30:25           date 13:15 39:22         doing 27:20 31:16         33:10,23 42:22         31:13 39:4 57:22         28:1,5,22 30:25           40:17,19,24 41:11         determined 36:11         determining 75:25         draft 53:11,15         60:7 62:24 65:9         37:19,21,25 38:           54:19 56:5 57:2         developments         13:16         drawer 62:5 63:11         69:19 75:21 76:10         38:6 39:4,14,15           59:3 64:22 76:12         device 20:1 21:10         drawers 63:6         80:10 81:6,10,16         40:18 43:3 44:8           78:4,7         22:25 23:5,17         drives 11:10,11         evidentiary 11:8         47:15 48:5,8 56           dated 40:25 46:25         59:4 64:16 81:25         duly 10:1         30:6         exact 23:9,13,16,24         62:10 64:21 68:           day 60:12 69:20         34:14 45:17,22         24:3,16 62:2         24:4,16 58:11         77:7,13 80:16,1	•
date 13:15 39:22         6:15,23 7:3         33:10,23 42:22         31:13 39:4 57:22         28:1,5,22 30:25           40:17,19,24 41:11         determined 36:11         determining 75:25         draft 53:11,15         60:7 62:24 65:9         37:19,21,25 38:           54:19 56:5 57:2         developments         drawer 62:5 63:11         69:19 75:21 76:10         38:6 39:4,14,15           59:3 64:22 76:12         device 20:1 21:10         drawers 63:6         80:10 81:6,10,16         40:18 43:3 44:8           78:4,7         22:25 23:5,17         drives 11:10,11         evidentiary 11:8         47:15 48:5,8 56           dated 40:25 46:25         day 60:12 69:20         59:4 64:16 81:25         duly 10:1         30:6         exact 23:9,13,16,24         68:5,6,19 69:4,5           72:7 78:3         34:14 45:17,22         24:3,16 62:2         24:4,16 58:11         77:7,13 80:16,1	
40:17,19,24 41:11       determined 36:11       74:8       57:23 58:4,23       31:24 33:5,21         41:21 48:5,9       determining 75:25       developments       60:7 62:24 65:9       37:19,21,25 38:         58:3,4,5,6,11,11       59:3 64:22 76:12       60:7 62:24 65:9       38:6 39:4,14,15         76:13,15,18,19,23       60:19 75:21 76:10       39:19 40:4,8,13         78:4,7       60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:10 81:6,10,16       40:18 43:3 44:8         60:20 22 47:2,8       47:15 48:5,8 56         60:20 22 53:5,17       40:20 22 47:2,8         60:20 24,6 25:1 26:7,9       56:25 57:1,20         60:20 40:25 46:25       40:20 22 47:2,8         60:20 40:25 46:25       40:20 22 47:2,8         60:20 40:25 46:25       40:20 22 47:2,8         60:20 40:25 46:25       40:20 22 47:2,8         60:20 40:25 46:25       40:20 22 47:2,8 <t< td=""><td></td></t<>	
41:21 48:5,9       determining 75:25       draft 53:11,15       60:7 62:24 65:9       37:19,21,25 38:         54:19 56:5 57:2       developments       drawer 62:5 63:11       69:19 75:21 76:10       38:6 39:4,14,15         59:3 64:22 76:12       device 20:1 21:10       drawers 63:6       80:10 81:6,10,16       40:18 43:3 44:8         76:13,15,18,19,23       21:11,13,15,21       drive 21:1,3       81:18 82:3,13,25       46:20,22 47:2,8         78:4,7       22:25 23:5,17       drives 11:10,11       evidentiary 11:8       47:15 48:5,8 56         dated 40:25 46:25       44:16 34:14 47:24       duly 10:1       30:6       62:10 64:21 68:         day 60:12 69:20       devices 21:7,9,25       duplicate 23:10       30:6       exact 23:9,13,16,24       68:5,6,19 69:4,5         72:7 78:3       34:14 45:17,22       24:3,16 62:2       24:4,16 58:11       77:7,13 80:16,1	
54:19 56:5 57:2       developments       drawer 62:5 63:11       69:19 75:21 76:10       38:6 39:4,14,15         58:3,4,5,6,11,11       13:16       63:23       76:13,20,21 77:20       39:19 40:4,8,13         76:13,15,18,19,23       76:13,15,18,19,23       78:4,7       21:11,13,15,21       40ives 21:1,3       81:18 82:3,13,25       46:20,22 47:2,8         4dated 40:25 46:25       24:16 34:14 47:24       40ives 11:10,11       40ives 11:10,11       47:15 48:5,8 56         4dates 54:5       59:4 64:16 81:25       40ily 10:1       30:6       62:10 64:21 68:         4day 60:12 69:20       34:14 45:17,22       24:3,16 62:2       24:4,16 58:11       77:7,13 80:16,1	
58:3,4,5,6,11,11       13:16       63:23       76:13,20,21 77:20       39:19 40:4,8,13         59:3 64:22 76:12       device 20:1 21:10       drawers 63:6       80:10 81:6,10,16       40:18 43:3 44:8         76:13,15,18,19,23       21:11,13,15,21       drive 21:1,3       81:18 82:3,13,25       46:20,22 47:2,8         78:4,7       22:25 23:5,17       drives 11:10,11       evidentiary 11:8       47:15 48:5,8 56         dates 54:5       59:4 64:16 81:25       duly 10:1       30:6       62:10 64:21 68:         day 60:12 69:20       devices 21:7,9,25       duplicate 23:10       30:6       exact 23:9,13,16,24       68:5,6,19 69:4,5         72:7 78:3       34:14 45:17,22       24:3,16 62:2       24:4,16 58:11       77:7,13 80:16,1	· ·
59:3 64:22 76:12 76:13,15,18,19,23 78:4,7       device 20:1 21:10 21:13,15,21 21:13,15,21 22:25 23:5,17 24:16 34:14 47:24 dates 54:5 day 60:12 69:20 72:7 78:3       device 20:1 21:10 drives 11:10,11 due 34:4 78:9 30:6 23:10 24:3,16 62:2       80:10 81:6,10,16 81:6,10,16 81:18 82:3,13,25 46:20,22 47:2,8 81:18 82:3,13,25 40:20,20 47:2,8 81:18 82:3,13,25 40:20,20 47:2,8 81:18 82:3,13,25 40:20,20 47:20 47:20 47:20 47:20 47:20 47:20 47:20	
76:13,15,18,19,23 78:4,7 dated 40:25 46:25 dates 54:5 day 60:12 69:20 72:7 78:3  76:13,15,18,19,23 21:11,13,15,21 22:25 23:5,17 24:16 34:14 47:24 34:16 81:25 34:14 45:17,22  datewers 93:0  drive 21:1,3 drives 11:10,11 due 34:4 78:9 duly 10:1 duplicate 23:10 24:3,16 62:2  24:4,16 58:11  77:7,13 80:16,1	
78:4,7  dated 40:25 46:25  dates 54:5  day 60:12 69:20  72:7 78:3  78:4,7  22:25 23:5,17  24:16 34:14 47:24  due 34:4 78:9  duly 10:1  duplicate 23:10  72:7 78:3  34:14 45:17,22  24:3,16 62:2  78:4,7  drives 11:10,11  due 34:4 78:9  20:4,6 25:1 26:7,9  30:6  exact 23:9,13,16,24  68:5,6,19 69:4,5  77:7,13 80:16,1	
dated 40:25 46:25       24:16 34:14 47:24       due 34:4 78:9       20:4,6 25:1 26:7,9       56:25 57:1,20         dates 54:5       day 60:12 69:20       devices 21:7,9,25       duplicate 23:10       exact 23:9,13,16,24       68:5,6,19 69:4,5         72:7 78:3       34:14 45:17,22       24:3,16 62:2       24:4,16 58:11       77:7,13 80:16,1	
dates 54:5       59:4 64:16 81:25       duly 10:1       30:6       62:10 64:21 68:         day 60:12 69:20       devices 21:7,9,25       duplicate 23:10       exact 23:9,13,16,24       68:5,6,19 69:4,5         72:7 78:3       34:14 45:17,22       24:3,16 62:2       24:4,16 58:11       77:7,13 80:16,1	, , , , , , , , , , , , , , , , , , ,
day 60:12 69:20       devices 21:7,9,25       duplicate 23:10       exact 23:9,13,16,24       68:5,6,19 69:4,5         72:7 78:3       34:14 45:17,22       24:3,16 62:2       24:4,16 58:11       77:7,13 80:16,1	
72:7 78:3 34:14 45:17,22 24:3,16 62:2 24:4,16 58:11 77:7,13 80:16,1	
21.1,10 30.11	•
days 60:13 76:14	72:7 78:3
1 40.0 47.13 40.10   <b>D.C</b> 2.7 3.0 4.19   02.2   00.19 01.13,21	days 60:13 76:14
78:1 55:12,21 75:15 8:11 <b>exactly</b> 11:4,22 82:4,9,12,21,22	78:1
deal 13:1   different 31:13   D2HHQ00CDT   13:11 21:5 58:8   82:22,24,25 83:	<b>deal</b> 13:1
<b>dealing</b> 13:7 34:4 44:15 44:3 <b>exam</b> 6:16 14:18 83:10,23,25 84:	dealing 13:7
deals 12:6 14:17   difficult 34:9 49:3     38:4 40:6,20   exhibits 6:13,21 7	
dealt 17:18   digital 10:24 11:9   E   53:24 58:2 61:2   7:9 16:4 54:25	<b>dealt</b> 17:18
<b>decrypt</b> 49:9 78:22   13:24 14:19,23   <b>earlier</b> 29:7,22   61:17 65:12 67:1   55:8 56:14	decrypt 49:9 78:22
deemed 26:13   19:7,17,19,23   33:25 55:10 64:2   72:23   experience 79:14	<b>deemed</b> 26:13
deems 26:8   20:21,24 21:12,18   68:12 74:2   examination 6:2,25   79:18	deems 26:8
deeply 53:17   21:25 29:3 30:9   easy 25:22   9:25 10:4 15:2   expert 14:23 16:1	1 0
defendant 3:13 4:3   32:19 34:16 49:25   efficient 68:18   19:12 21:25 28:7   19:2,7	<b>defendant</b> 3:13 4:3
4:13 73:25 62:20 79:12 80:9 <b>effort</b> 49:8 78:22 29:19 39:20 46:25 <b>expires</b> 85:24	4:13 73:25
<b>Defendants</b> 1:10 <b>Dimitrios</b> 1:9 4:3 <b>Election</b> 5:5 48:6 56:6,13 <b>explain</b> 78:8	<b>Defendants</b> 1:10
defense 27:24         8:6 9:11 56:4         electronic 19:25         74:19 82:17         explaining 26:21	defense 27:24
30:24 37:19 <b>dire</b> 6:4 14:25 15:2 20:14 21:25 22:25 <b>examine</b> 27:1 38:9 <b>Extra</b> 54:22	30:24 37:19
<b>degree</b> 15:6,9,13,15 <b>direct</b> 6:3,5 10:4 <b>employed</b> 85:13,16 79:15 <b>extract</b> 36:23 37::	<b>degree</b> 15:6,9,13,15

25.10	2 - 10 2 - 2 - 7 - 1	15.10.55.1.534	l <b>.</b>	<u></u>
37:12	26:10 36:3 51:4	47:18 55:16,24	84:12	hold 14:13
extracted 54:8	52:7 54:18 60:14	69:24 70:9 71:6	Golf 64:3 68:13	Hotel 64:9
extraction 17:19	files 24:22 61:8,20	71:20 72:4,21	Good 8:21 9:1 10:6	Howard 4:14 6:8
35:4	<b>final</b> 61:16 73:3	79:8,9	10:7 15:4 39:12	9:12,12,18 67:9
extrapolate 34:10	74:18 82:2	four-page 16:23	56:3 73:23	67:11,23 68:2,4,8
49:3,25 50:3,14	Finally 78:20	frame 54:4	Goodin 1:24 2:8	69:7,25 70:10,19
extrapolated 37:16	financially 85:17	front 16:10 38:5	8:16 85:4,21	70:25 71:8,24
extrapolating 35:2	<b>find</b> 25:3 48:25	40:9 42:13 47:9	Goodness 18:1	72:6,9 73:5,14,19
extremely 63:19	49:12 75:16	56:15 68:20	government 6:14	79:6,9,23 80:4
e-mail 34:8 36:25	fine 9:20	FTK 26:12 55:3,4	14:22 39:3	human 53:3
47:23 48:11,16,18	fingerprint 22:11	functions 21:13	Government's	hundreds 14:7
48:21,23,25 49:2	<b>finish</b> 77:9	34:7	16:15 27:24,25	H-O-W-A-R-D
49:6,9,11,12,21	<b>firm</b> 8:14	further 26:11,11	28:1,5,22 30:25	9:14
49:23 50:2,6,16	first 10:1 16:18	30:5 32:3,14	31:24 33:5,20	I
51:5 52:8,24 53:2	20:18 31:6 40:20	37:15 39:9 67:6	37:19,21,24 38:2	IB44 7:5
53:14 54:8	40:22 49:17 64:20	74:15 80:12,13	38:6 56:6 64:20	<b>ID</b> 30:10,17,21 31:2
e-mails 24:23 25:23	71:12 73:2 74:21	82:15,17 84:11	77:6,13 83:23,25	31:8,12,16,20
25:23 37:2 75:11	76:9 83:1	85:15	gracious 18:1	41:3
75:16 78:22	five 17:24 67:13	F4KJQ8YSF193	ground 82:10	idea 58:25
$oxed{\mathbf{F}}$	fluid 17:19	45:16	guess 34:23 67:3	identical 29:10
F 1:8 8:5	<b>folder</b> 52:23 53:7,9 53:15	F4KJW7VVF193	H	identification 16:7
fact 18:8 27:14	<b>folders</b> 51:4,9 52:7	43:10 45:2	H 3:14	27:23 28:2 37:18
31:11 34:4 50:24	52:10 53:11	G	hand 39:13	37:22 39:16 68:7
57:8 75:6	follow 80:15	Garcia 5:11 8:13	handle 12:8 60:4	69:6 77:6
<b>fair</b> 44:16	follows 10:2	general 20:2 23:3	handled 58:25 59:4	identified 64:2
falls 25:7	foregoing 85:5,7	53:9	60:9 82:3	68:12
fancy 17:4 22:8,12	forensic 10:21 11:1	generate 79:3	handwriting 81:21	identify 16:12
29:11	11:3,4,6,15,20	generated 24:7	happens 26:3	25:12
<b>far</b> 64:1	12:9 13:19 14:18	26:13 37:14 55:2	hard 11:10 21:1,3	<b>ill</b> 65:18
<b>FBI</b> 11:1,2,5 12:25	15:24 19:7,15,25	generates 22:10,13	hardware 12:6	illness 65:21 74:22
13:9,14 14:5,9	26:16 36:17 55:5	geolocation 54:20	53:23	75:4
19:16 49:8 72:16	55:7 75:3,7,14,18	given 12:20 13:6	Harvey 4:5 5:9	image 23:9 24:21
73:9 75:3,7,14,18	79:12	59:22 73:9 85:12	hash 74:4	24:22 25:3 29:2,2
78:21 80:22 81:3	forensics 14:23	<b>go</b> 11:16 21:20	head 30:20 76:25	29:5 33:25 60:22
82:25	18:11,23 19:23	24:21,24 25:2,11	heading 17:8	61:13 64:13,14
feasible 34:13	form 69:9 72:16	26:6 34:23 35:21	health 65:24 66:3	impeached 42:7
features 23:5	73:8 80:22,25	42:16 49:20 57:6	hear 65:20 66:8	important 20:3
February 69:1	81:2 82:13	64:24 70:11 71:14	hearsay 41:6,15	23:15
<b>Federal</b> 10:12,15	format 25:19,22	71:25 72:10 77:10	42:3,4 45:20 46:2	<b>Inbox</b> 52:11
10:19 59:16	50:1 53:3 78:19	goes 24:5 58:22	46:10 47:18 55:16	include 59:12
<b>field</b> 12:15 13:16	forth 11:11 29:12	<b>going</b> 16:2 27:22	56:16 69:23,23	independently
13:21 14:14,23	63:21 83:7	28:15 30:23 31:24	70:9 72:4,5	42:19
17:16 18:5,10,14	<b>found</b> 47:6 52:23	33:4,13,20 37:17	<b>held</b> 8:9	indicates 22:19
18:18,22 19:2,22	52:23	39:13 45:7 61:3	<b>help</b> 16:14	Indicating 51:6
65:8	foundation 39:6	67:17 68:1,5 69:3	hereto 85:17	individual 11:23
LEL 22.11 12 26.0	Touliumion 57.0			
<b>file</b> 22:11,12 26:9	42:5 45:20 46:2	77:5 82:20 83:22	hesitation 83:16	12:14

information 11:8	issued 55:9	59:18,23 60:1	69:24 70:9 71:6	logically 49:24
34:11,24 35:3,10	issues 53:23 78:16	72:18 73:10 82:5	71:19 72:3,20	logistical 78:9
35:12,16 36:13	item 7:5,7 24:4	<b>J-E-S-S-E</b> 9:10	<b>laptop</b> 6:19 7:4	long 10:14,25 11:22
48:23,25 49:4	25:3 28:13 29:9		29:4 34:18 36:11	53:20 54:1 78:12
50:13 54:17,19,20	45:13,15 52:17,22	K	53:2 54:1 57:19	look 31:4 43:19
54:22 79:22	57:2 58:3,10,21	keep 13:15 81:6	57:21 58:22 61:1	44:7 45:7 48:2
initial 20:16 22:21	60:9 64:22,25	kept 81:14,21	61:16,22 62:3,12	54:4,6 58:1 64:20
initials 39:1	68:15,20 69:9,21	<b>Kesari</b> 1:9 4:3 6:17	62:13,19,21,23	68:9 75:15 77:8
installed 47:24	70:4,7,14 72:13	8:6 9:11 38:15	63:3,7,10,23 65:4	77:10 83:18 84:2
instance 19:6	73:4 82:13 83:10	45:18 47:16,22	68:12 83:15 84:9	looked 38:19
instances 19:1	83:13 84:1,5,5	56:4 62:14 67:7	large 60:14	looking 21:2 26:7
intact 62:21	items 22:22 27:16	<b>Kesari's</b> 54:1 61:16	<b>Laurin</b> 3:14 9:1	30:11 77:9
integrity 3:6 5:7	36:16,22 37:6	62:11,23 63:10,23	15:4	looks 43:9 45:5
20:3,6 23:22	41:11,22,25 52:13	key 63:18,22	laurin.mills@lecl	68:20,22 69:12
59:17 60:8 62:1	52:15 56:20 75:19	<b>Kilo</b> 64:4 68:14	3:20	70:6
65:9 72:17 73:9	76:9,18 77:15,20	kind 20:17 61:5	leading 35:19	<b>Lori</b> 1:24 2:8 8:16
75:21 80:9		79:19 83:2	LECLAIRRYAN	85:4,21
interested 85:18	J	<b>King</b> 4:6	3:15	loud 28:16 33:15
interim 22:17	<b>J</b> 1:24 2:8 9:24 10:9	know 12:20 45:22	<b>left</b> 62:20	lower 39:1
<b>introduce</b> 8:19 9:19	17:2 85:4,21	47:12,20 48:3	legal 8:14,15,17	
34:22 36:9 80:7	jailbreaking 35:24	50:20 53:14 54:5	lengthy 11:16,21	M
introducing 20:8	35:25 36:1,5	54:13 59:15 69:17	28:25 53:22 78:10	<b>Mac</b> 52:1,3
inventory 20:19	January 15:21	72:21 73:7	Les 57:9,12	machine 85:9
23:3 29:1 34:19	56:10,21 57:5	knowledge 13:21	letters 16:19	MacIntosh 42:1,10
49:18	58:14 64:17,22	58:8 72:15 73:12	let's 22:11	42:22 43:1,7,17
investigated 44:2	68:23 77:18,20	known 74:3	<b>Lima</b> 64:9	43:20,23 44:2
<b>Investigation</b> 10:13	78:6	<b>Kravis</b> 3:4 6:3,5,10	limitations 34:5	mail 50:21 52:18
10:15,19 59:16	jbinnall@harvey	8:21,22 9:5,20	limited 63:20	mailbox 53:9
investigations	4:10	10:5 14:21 15:1	line 33:14 40:21	maintain 13:21
19:18	<b>Jesse</b> 1:7 4:4,13 8:5	16:5,8 19:13 28:4	43:19	59:6,8
investigative 25:15	9:9,14,16 56:4	35:20 37:23 39:7	<b>list</b> 18:9,13,17,21	maintained 22:14
26:11	73:25	39:17 41:5,14	18:25 19:5 48:10	75:22 81:18
invoke 9:4	<b>job</b> 1:25 12:19	42:2,11 44:14	<b>listed</b> 41:12 45:13	maintaining 13:22
<b>involve</b> 20:16 35:17	19:16,17,19 25:2	45:19 46:1,9,13	listing 14:12	making 20:10
<b>involved</b> 13:23 29:2	25:6 27:14 31:11	46:21 47:17 55:15	<b>lists</b> 17:24 44:15	35:12 36:1
<b>involves</b> 11:17,18	75:3,14,18 81:5,9	55:23 56:12,18	LiveNote 2:9	manner 65:4
34:19 60:16	<b>John</b> 1:8 3:13 8:5	65:22 66:4 67:16	<b>living</b> 10:11	<b>March</b> 41:1
Iowa 1:2 8:8	9:2 55:13,22	68:3 69:22 70:8	<b>LLP</b> 4:16	mark 16:3 39:14
<b>iPad</b> 43:14 44:5,9	<b>Jonathan</b> 3:4 8:22	70:15,22 71:5,19	<b>load</b> 78:11	68:5 69:3
44:13,15,18,21,23	jonathan.kravis	72:3,8,20 73:11	located 48:11	marked 16:4,7
45:8	3:10	74:17,20 79:7,10	<b>location</b> 63:5 75:10	27:23 28:2 30:24
<b>iPhone</b> 7:6 33:17	<b>JR</b> 4:14	79:24 80:5,11	lock 63:7	37:18,22 39:16
38:15 49:1,19,20	<b>Juliet</b> 64:3 68:13	82:10,18 84:10	locked 49:10 62:6	68:7 69:6 77:6
50:8,13	<b>June</b> 57:13 72:2,7	т	63:6,11	82:21
irrelevant 79:9,23	72:11	<u>L</u>	log 30:11 69:23	markings 38:20,24
80:4	<b>Junk</b> 52:17	lack 45:19 46:1	72:5	master's 15:18
issue 54:23 82:14	<b>Justice</b> 3:5 5:6	47:17 55:16,23	logical 35:4	material 11:8 12:8
			<u> </u>	

,		l	1	
20:4,6,11,19	9:1,2 14:24 15:3,5	nineteen 64:24	42:11 44:14,16	24:14 26:5,8 60:6
24:25 25:1,12,19	19:11 39:11,18	<b>normal</b> 64:24 81:14	45:19 46:1,9	61:25 71:7
25:21 26:6,7,9	41:7,16 42:8,15	Northwest 2:7 3:7	47:17 55:15 65:22	<b>operating</b> 13:3 36:2
29:6 30:4,6 32:4	44:16,17 45:21	4:17 8:10	66:4 69:22 70:8	52:1
32:14 34:19 37:15	46:3,11,18 47:19	<b>Notary</b> 2:11 85:22	70:15,22 71:5,19	order 11:14,14
75:23 78:12 79:4	55:17,20 56:17	note 23:4 70:24	72:3,8,20 73:11	35:10 63:16 79:3
materials 26:1,3	80:14 82:15	73:3	79:6,6,23 80:4	organization 14:17
37:12	mind 56:14 57:7	<b>notes</b> 27:5 50:19,24	82:10	original 7:9 23:11
mathematical 22:8	<b>Mini</b> 42:1,10,23	50:25 53:4 54:4,6	objections 55:23	23:17,19,23 24:4
74:5	43:1,7,14,17,20	58:2,6 59:14,25	observe 49:22	24:16 29:11 69:19
matter 8:4 53:18	43:23 44:2,5,9,13	61:3 72:23 73:2	obtained 64:15	outcome 85:18
78:1	45:8 49:13	82:8	offers 14:22	Outlook 51:13,19
McIntosh 13:7	Minis 44:15,18,21	Notice 16:15	<b>office</b> 51:1,4 63:5	53:10
<b>MD5</b> 22:5,7 24:5,7	44:24	notwithstanding	63:14,15,16	<b>outside</b> 9:6 60:10
60:16,21 61:1,16	minutes 67:13	75:4	offices 2:5	overcome 78:16
74:3,11	mismatches 61:21	November 64:3,9	<b>official</b> 40:6,9	overnight 63:8
mean 14:6 20:5	<b>mix-up</b> 31:13	68:13	81:17	oversees 13:18
32:8 35:6,7 51:16	<b>mobile</b> 34:14	<b>number</b> 6:18 8:3,8	<b>Oh</b> 45:11	
53:25 55:4 61:7	modifications	16:6 20:2 22:10	okay 9:5 16:22 18:8	<u> </u>
65:7 72:2 78:1	20:10 22:4 35:13	22:13,14,17,18	18:17,25 19:10	package 58:23 62:5
measures 65:10	modifying 20:14	23:4 24:7,9,11	20:5 27:22 28:15	72:24
media 10:24 11:9	21:17 35:17	26:25 27:4,9,19	30:1,23 31:15,19	packet 60:2
13:24 14:19 20:25	moment 23:25 39:8	28:1,8,16,18	32:10,17 33:13	page 6:2,15,23 7:3
21:12 23:10 29:3	<b>Monday</b> 1:14 2:4	30:14,17,21 31:2	37:17 39:3 40:8	16:19 17:7 31:6
62:20 80:10	months 64:25 78:1	31:8,16,20 32:22	40:15,17 41:11,20	39:25 40:20,22
medication 66:19	morning 8:21 9:1	32:25 33:5,9,15	42:9,16,18 43:6	48:7,8 57:8 64:20
67:3	10:6,7 15:4 39:12	33:18 37:20,21,25	43:16 44:4,7,22	69:13,15,18 70:6
medications 66:9	56:3 73:23	38:3 39:4,14,15	45:3,17,22,25	70:12 71:12,13
66:15	<b>Move</b> 82:9	39:19 40:5 41:3	46:12,19 47:2,5,8	72:24 73:2,2 83:1
<b>Meena</b> 4:15 9:15	<b>moves</b> 39:4	42:25 43:7,9,13	47:12,15,20,23	83:24
73:24	<b>music</b> 37:4	44:1,3,9,12 45:2,4	48:4,10,15,24	pages 73:7,16
meena.sinfelt@b		45:9,14,15 46:20	50:15,20,23 54:13	paper 18:10,14
4:22	N	46:22 47:3,8,16	55:12 56:9 57:6	papers 17:12,15
meeting 67:10	N 1:9 8:6	48:8 61:20 63:18	57:25 58:7 59:10	19:16
mentioned 55:3	name 8:13,22 9:10	64:3,8 65:10 68:6	61:17,22 62:8,16	paralegal 5:9
68:11	9:13 10:8,9,10	68:13,16 69:5	62:19,22 63:2,13	paralegals 9:19
messages 37:5	16:18 17:5 40:1	73:4 77:13 80:16	63:22 64:7,12,16	parse 24:20
48:11 52:24	56:3 59:3 67:11	80:18,19 83:10	65:3,13,17 66:2	parsing 75:23
metadata 54:11,13	73:23	numbers 27:16	66:18 67:5,12	part 12:5,10 13:17
54:16,17	nature 65:21	30:10 31:12 44:23	69:11,14,17,20	27:14 31:11 59:13
methods 21:16	near 81:25	numerous 14:6,11	70:1,11 71:1,4	65:7 82:8
33:24 35:15 36:24	need 56:22 66:12	34:9	72:15 73:6,15	particular 21:13,15
Microsoft 50:25	needs 42:6 71:22		74:1,7,11,15	21:23 22:14,16
51:4,13,20 53:10	neither 85:12	0	77:11,12 80:25	24:8,11,19 25:7
<b>middle</b> 83:24	network 25:10	<b>Object</b> 42:3	81:9,20,24 82:4,9	26:9,10 28:7 29:4
<b>Mill</b> 3:16	never 62:13	<b>objection</b> 35:19	82:15 83:9,22	34:13 38:10,13
<b>Mills</b> 3:14 6:4,6,11	<b>nice</b> 67:10	39:5 41:5,14 42:2	once 21:24 22:21	45:1 48:2 49:19
		I	I	

53:5,18 54:18
58:20 59:4,9 60:9
60:25 61:15 62:18
63:7 67:1 68:16
70:5 73:4 75:11
75:16 80:9 81:19
parties 85:14,17
passed 12:22,24
14:2
pass/fail 12:20
path 53:5,7
Pennsylvania 2:6
3:7 4:17 8:10
<b>people</b> 63:14,19
perform 19:25
26:16 34:16
performed 29:1
35:4
personal 49:13
50:10,16 53:21
79:14,18
personally 54:7,10
perspective 20:22
pertinent 76:1,1
<b>phase</b> 24:20
philosophy 65:11
<b>phone</b> 6:17 13:5
32:19,22 33:1,6,9
33:16,23 34:1,2,3
34:17,25 35:13,16
35:17,23 36:3,5
36:10,13,15,16,18
36:23 37:3,13,16
38:16 49:21,23
50:2 64:1 65:3,5
65:14 75:1 76:11
76:23 78:23 79:16
79:22
phones 14:3
Photos 37:4
physical 20:20
21:10,24 35:5
64:14
<b>physically</b> 49:20,24
63:1 76:20
<b>Pilger</b> 5:5 8:24,24
place 22:23 23:3

```
48:6 62:6
placed 63:4
Plaintiff 1:5 3:3
platform 14:18
 25:9,18 51:14
platforms 13:2,7
play 38:7
please 8:19 9:22
 10:3 39:8 64:20
 65:21 66:11 70:12
PLLC 4:5
Plus 12:6
point 24:1 32:13
 57:10
points 24:11
possible 14:24
post 61:2
potential 11:8
 24:25 26:7 30:6
potentially 36:12
 79:3,21
power 58:22
practice 22:3 34:19
practices 13:17,22
 20:7 23:3 65:8
 81:15
preclude 34:6
precludes 65:24
prepare 26:20
 57:15
prepared 66:19
 76:16 83:6
preprinted 80:22
 80:24
PRESENT 5:3
presentation 18:18
 18:22
presentations
 17:25 18:2
presented 68:20
pretty 49:10 77:23
previous 69:15,18
 73:7.16
previously 55:3
 70:18 72:18
primarily 10:22
```

**prior** 72:13 76:14

```
priority 65:10
probably 68:17
 78:3
problems 50:1
proceed 10:3
PROCEEDINGS
  8:1
process 11:16,21
  11:22 12:13 19:19
 20:16 22:9 24:10
 29:1,18 34:23
 53:6,6,16,22
 58:18 59:13 60:15
 61:7,10,18,19,25
 65:12 75:22 78:10
processed 25:19
 44:21,24 53:15
processing 10:23
  11:7 13:23 20:20
 21:22 22:15 24:19
 29:5 34:3,20
 48:21 49:2
produced 59:16
 72:16
Professional 2:8
proficiency 13:20
  14:1
program 11:24
  13:18
prohibits 21:12
protection 21:7,8
 21:21 22:24 34:12
provide 25:18
  32:18 78:13
provided 30:4,24
 59:25 72:23,25
 81:3
providing 78:17
```

<b>putting</b> 63:10
Q
qualified 19:1,6
<b>Quebec</b> 64:4 68:14
<b>question</b> 32:9 42:3
46:14 71:10 73:6
questions 19:22
26:14 39:9 42:12
42:13 67:7,15,25
73:20 74:1,16,18
74:23 75:9,12
76:4,6 78:21,23
80:12,16 82:19
84:11
quickly 77:23
quite 51:2 78:10
R
<b>R</b> 1:7 4:4 8:5
ran 50:1
read 25:22 28:15
31:19 33:15 43:13
64:7 83:25
readable 25:20
53:3 78:19
readily 35:11
really 65:2
<b>Realtime</b> 2:10,10
reason 73:1 78:15
reasons 78:9,15
recall 13:10 42:6,9
42:21,25 43:22 47:25 48:15 50:15
51:3,9 52:22,23
52:25 54:3
receipt 41:22
receive 11:12 12:25
22:25 64:22
received 12:2 13:4
13:8,14 15:9,15
15:18 41:12 56:20
57:2,19 58:3,10
59:5 76:19 77:14

32:1,11,14 37:7

62:4,4 63:7,9

81:25

77:19 receiving 64:25 recess 67:19,20 recognize 27:25 37:24 38:21 68:18 82:22 recollection 43:4 44:8,20 46:16 56:23 64:19 71:16 71:18,20 77:3,14 83:20 84:1,4 **record** 27:3 31:1,15 32:25 33:8 44:23 50:18 55:19 67:18 67:22 81:10,14,17 81:20 82:6 83:9 84:13 85:11 **recorded** 27:6,10 27:11 28:16 33:6 recording 27:15 recover 36:17 37:7 Recross 6:11 **Recs** 28:6 redacted 39:4 Redirect 6:10 74:19 82:17 **refer** 61:3 **Reference** 40:22,23 referred 74:3 **referring** 48:7 57:3 59:19 62:11 67:3 68:15 reflected 76:15 reflection 81:19 **refresh** 43:4 44:8 56:23 64:19 71:15 71:18 77:2,14 83:19 84:4 **refreshed** 71:20,23 refreshes 84:1 regarding 57:10 **regards** 62:10 68:11 Registered 2:8 regular 22:5 regularly 81:15 **related** 85:13

**Public** 2:11 3:6 5:7

**Publications** 17:8

**publish** 19:16,20

**published** 17:12,21

18:10,14 51:19

put 27:11 29:11

85:22

pull 24:22

59:17 72:17 73:9

relative 85:15	60:7 75:17,20	SANS 14:17	37:17 77:5 82:20	73:7 76:2
relevance 65:22	responsible 10:23	satisfied 62:1	83:22	specified 53:5
66:4	11:7 25:25 75:25	saw 70:18	shown 27:23 37:18	55:10 60:16
relevant 25:3,12	results 29:17 30:2	saying 35:15 59:23	shows 72:18	specifies 58:3 61:20
26:13	32:1,11	says 28:12 40:21	sign 40:4 47:2	specify 48:9 61:4
remember 26:25	resumed 19:12	41:8,10,17,25	signature 40:7 47:5	spelled 9:13 10:10
29:7,24 30:20	resumé 17:5,24	42:17 56:8 57:5	84:14	stamps 54:19
32:22 63:10 64:4	18:8,21,25	57:14	signed 47:9,13	stamps 34.19 stand 25:14
65:14 71:22 74:23	retained 7:9	science 18:15,18	signed 47.9,13 similar 45:8	stand 23.14 standard 53:11
75:12 76:6,8,22	review 22:22 24:25	19:2	Sinfelt 4:15 6:9	standard 53.11 standpoint 20:21
78:23 83:13	25:15,18 26:11	sciences 19:7	9:15,15 73:22,24	start 74:13 76:21
report 6:16,25	29:6 30:5 32:5	screen 61:19	79:8	77:21
26:12,20 27:7,10	37:15 42:22 43:11	search 32:12 36:6	single 12:22 18:9	started 57:23
27:12 28:6,10,17	44:19 50:4,7 54:7	48:11 79:1,20	18:14,17,22 19:5	state 48:5
30:25 31:1,5,9,19	54:10 55:21 75:24	searched 30:7	sir 10:6 12:3 42:24	stated 14:15 28:25
33:2,14 37:14	78:10,12 81:7,10	second 45:8 57:8	66:8 71:25 72:12	72:22 82:11
38:4,14 39:19,22	reviewed 43:1,8	<b>Section</b> 3:6 5:7	sit 26:24 30:19	States 1:1,4 3:5 8:4
40:1,6,10,20 41:8	44:4,10,13,21	59:17 72:17 73:9	32:21 53:13 76:22	8:6,23,25 85:2
41:10,17,25 42:4	49:1 81:16	secure 62:5,6 63:4	sitting 58:8	stay 60:13
42:7,12,14,17,19	reviewing 43:22	secure 02.3,0 03.4 secured 57:21 60:9	software 12:7	stay 60.13 stays 22:18 24:12
42:7,12,14,17,19	<b>Richard</b> 5:5 8:24	see 17:9 28:8 39:1	21:11 47:23 48:17	stays 22.18 24.12 step 24:17,18 29:2
45:5 46:24 48:4	right 15:13,16,19	40:21 43:20 49:20	48:18,20 50:16	34:23
	15:22 17:5,12	50:24 56:24 67:14	79:19	
50:12 55:2,8,11	,	76:18 83:25	<b>Solutions</b> 8:14,18	<b>steps</b> 19:24 20:13 22:17 26:21 29:8
56:5,8,24 57:14	18:6 30:11 31:6		1	
57:16 58:2 59:11	35:14 38:7 39:1 39:23 40:2,9	seen 69:14,14 sense 32:7 35:9	soon 77:19,21	29:14 34:15 36:15
59:15,19,21 65:1	′	Sent 52:13	<b>Sorenson</b> 46:6,7	stopped 21:14
66:19,20 76:16 77:2,8,10 78:5,7	41:13,18,23 52:8		Sorenson's 46:8,16	<b>storage</b> 11:9 20:24 21:12 23:10 29:3
80:20 83:19	60:20 61:11,12	<b>September</b> 1:14 2:4 8:11	<b>sorry</b> 43:18 45:11 56:12 59:20 61:11	
	63:25 64:10 66:13	= :		62:20 80:9 82:1
Reported 1:23	67:6,24 69:3 70:20 71:9,14	serial 6:18 23:4	64:7 65:20 66:2,8 66:22	store 51:4
reporter 2:9,9,10	′	26:25 27:4,9,16		stored 57:21 61:23
8:16 9:22 85:1,4	72:12 73:19 77:11	27:18 28:8,16,18	sound 64:10	63:3,23 65:3,4,14
reports 54:24 55:3	81:11,16	32:22,25 33:5,9	Southern 1:2 8:7	Straka 57:9,12
55:9 56:15	Road 3:16	33:15,18 42:25	<b>space</b> 63:5,17,19	Street 4:6
represent 8:22,25	role 19:15	43:6,9 44:1,3,9,12	<b>Spam</b> 52:20 <b>special</b> 9:5 10:12	strike 43:12 70:2
9:14,16 56:4	room 57:22,23	44:23 45:1,4,9,14	_	71:1
67:11	Roscoe 4:14 9:12	45:15 64:2 68:13	10:14,16,20 14:22	structure 52:7
request 30:15	67:11	68:16	19:14,21 24:22 28:20 31:23 33:19	stuff 20:9
40:23,25 41:3,22	roscoe.howard@	service 40:23,25		submit 58:23
42:10 56:9	4:21	41:3,21 42:10	39:8 57:9,12	submitted 42:1
requested 34:11	routinely 12:14	56:9	74:17 78:25 79:11	substantially 52:4
35:3 53:17 76:2	RPR 1:24	set 30:13	82:20 83:23	Suite 2:7 3:17 4:7
required 12:11	rule 9:4	shorthand 85:9	specialist 8:15	4:18
respect 75:19 83:4	run 22:9,12	shortly 77:23,25	specialized 11:12	supercritical 17:19
Response 10:22	runs 51:22 52:1,3	shots 61:19	11:17 12:3 24:20	sure 12:14 20:13
responsibility 25:7	<u> </u>	show 16:2 25:23,23	specifically 36:25	21:2,17 22:22
32:13 48:1,14		27:22 30:23 33:4	62:9 63:9 65:13	23:15 24:2 27:15

	1	1	1	
30:10 31:12 33:25	49:11 54:5 83:6	40:22	<b>uphold</b> 65:11	61:12 66:24 77:8
49:16 51:2 56:17	test 13:20	total 23:6	<b>upload</b> 50:6 60:15	80:7 83:24
58:19,21 61:12	<b>tested</b> 12:19	touched 23:25	60:15	Washington 2:7
74:7 75:21 83:17	testified 10:1	track 81:6	uploaded 26:4,5	3:8 4:19 8:11
83:17,18	testimony 29:8,22	trained 51:12 65:8	61:9	way 32:9 35:18
swear 9:22	45:3 74:2 85:6,8	<b>training</b> 11:13,17	uploading 25:25	36:21 47:13 48:23
sworn 10:1 85:7	85:11	11:18 12:2,3,5,7	58:16 60:11,18	52:4 63:18 65:15
system 25:13 26:1,4	testing 11:18 12:12	12:11,23 13:21	61:5,14,14	68:18 78:18
26:6 29:23 30:5,8	tests 12:21,24	trainings 12:4	use 21:6,21 24:20	ways 35:11
30:12,13 31:3	text 37:4	transcribed 85:10	25:10,17 30:16	weeks 78:1
32:3,12,15 36:2,3	thank 9:6 19:14	transcription 85:10	33:24 34:6 35:15	went 11:24 57:22
37:8 50:5 52:1	28:20 33:19 39:8	TransPerfect 8:14	36:5,24 80:2	weren't 63:2
58:17 60:24 61:6	39:17 43:11 56:18	8:17	user 24:24 78:19	<b>Wesley</b> 1:13 2:3
61:9 78:13	67:5,16 74:15	travelling 65:25	uses 51:4	6:24 8:3 9:24
<b>systems</b> 2:10 13:3	80:11 84:10	<b>trial</b> 9:3,8	utility 25:17	10:9 14:22 16:19
S-I-N-F-E-L-T	Theresa 5:9	<b>true</b> 17:14 48:24	utilize 22:4	17:2
9:16	thing 20:3,18 22:1	74:11 81:5 85:11	utilized 20:7	willing 66:25
	30:11 49:17	<b>try</b> 32:8 35:15	<b>U.S</b> 5:6	Window 13:2
<u>T</u>	<b>think</b> 9:7 14:6	<b>trying</b> 60:14	<b>T</b> 7	<b>Windows</b> 14:15,18
T 4:15	43:16 50:25 58:13	turn 39:25 42:20	<u>V</u>	51:22 52:4
take 12:5 19:24	Thornburg 2:6	43:3 57:6 70:11	v 1:6 8:5	Windows-based
20:13 23:8 29:9	4:16 9:13,17	71:15 80:17	vague 44:14 70:15	13:3
29:14 35:6 36:14	three 17:12	turned 32:4,6	70:22 71:5	Windows/Intel
42:19 44:7 46:19	three-month 41:21	two 11:25 12:1,11	varies 47:12	51:17
49:8 53:20 54:2	<b>thumb</b> 11:10	16:3 44:15,21,23	various 79:15	<b>Wintel</b> 51:14,16
58:1 60:6 62:3	<b>tightly</b> 49:10	55:1	verification 59:13	witness 9:8,22,25
65:10 66:11 67:13 68:9 78:12	time 13:13 14:21	<b>type</b> 9:3 36:12 67:2	version 47:13 51:25	14:25 19:2,7,11
taken 34:4 35:22	23:23 33:10 39:3	<b>types</b> 12:8	52:3,5	28:3 42:6,11
62:19 67:19 85:5	53:18 54:4,19		video 8:3,15 Videographer 5:11	46:15 55:18,25
85:8,15	59:3 60:4 61:23	ultimately 11:19	8:2 9:21 10:3	56:15 65:23 66:5
talked 29:8,23	62:22,24 66:11	12:20 26:12	67:17,21 84:12	70:17,24 71:21
33:25	67:18,22 74:25	undergo 13:20	videos 37:4	72:22 73:12 82:11
talking 64:4 75:2	78:12 81:25 82:3	undergoing 66:21	VIDEOTAPED	85:6,8,12
76:10,24 83:3	84:13	undergraduate	1:13	witnesses 9:4 16:15
Tango 64:10	timing 76:5	15:6,12	Virginia 3:18 4:8	<b>work</b> 11:13 23:15 26:15 27:20 31:16
Tate 1:8 3:13 8:5	<b>today</b> 30:19 32:21 53:13 58:8 73:17	understand 64:12	visually 49:22	32:3,6 33:11
9:2 15:5 55:13,22		65:17	vitae 6:24 13:12	,
Team 10:22	75:2,7 76:11,23 76:24	understanding	16:24 17:1,4	57:10 75:6 76:5,9
technical 78:16	tool 21:6 22:3 25:9	12:15	voice 83:17	77:15,21 78:6 81:3
techniques 79:2	36:6	unique 22:10,13	voir 6:4 14:25 15:2	worked 15:22
tell 44:22 53:7	<b>Toolkit</b> 55:5,7	23:4 30:14,16,20		working 23:11,12
65:21 74:12	tools 12:17,18	31:2,8,20	W	23:16 29:10 62:2
ten 11:3	24:20 33:24 34:5	<b>United</b> 1:1,4 3:5	<b>wait</b> 9:6	works 19:23
terminal 66:5	34:9,10 79:15,19	8:4,6,23,25 85:2	<b>waived</b> 84:14	world 79:1
terminology 35:24	79:20,20 80:2	unlocked 49:19	want 9:18 19:21	write 21:6,8,12,21
terms 20:2 34:12	top 30:20 31:6	updated 60:23	23:19 26:14 36:9	22:24 34:12 40:13
	30p 20.20 21.0	_		

				rage 93
written 28:10	14 85:25	3	<b>74</b> 6:10	
wrong 64:8	<b>14915</b> 1:25		740.10	
wrote 31:9	<b>15</b> 6:4 10:17	3 6:24 16:4,6,9,14	8	
wiote 31.7	15th 56:10	16:22 17:7 64:3	<b>8/4/2015</b> 6:25	
X	<b>16</b> 6:24	68:13	<b>80</b> 6:11	
<b>X-Ray</b> 64:9	17th 46:25 56:7	<b>30</b> 64:17 68:23		
	57:16 78:5	<b>30th</b> 56:21 57:5	9	
Y	<b>1717</b> 2:6 4:17 8:10	58:14 77:18,20	<b>950</b> 3:7	
years 10:17 11:3,25	<b>19</b> 6:5	300 4:7		
12:2,11	190.3 1990s 17:22 18:3	<b>37</b> 6:16		
<b>Yoo</b> 1:13 2:3 6:22	<b>1990s</b> 17.22 18.3 <b>1991</b> 15:10	<b>39</b> 6:6,25 64:9		
6:24 7:2 8:4 9:24	<b>1991</b> 15:10 <b>1992</b> 15:16	4		
10:9 14:22 15:4				
16:6,9,19 17:2	<b>1996</b> 15:18,21	4 6:25 17:7 39:14		
19:15,21 28:20	2	39:15,19,25,25		
31:23 33:19 39:8	<b>2</b> 6:18 27:24,25	40:5,13,18 43:3		
39:12,15 56:3	28:1,5,22 30:25	44:8 54:25 55:8		
57:18 67:10,24	31:24 33:5,21	<b>4th</b> 39:23 40:19		
68:6,9 69:5 70:1,3	46:20,22 47:3,8	41:1		
70:13 73:23 74:17	47:16 48:5,8	4:15-CR-103-JA		
78:25 79:11 80:17	54:25 55:8 56:6	1:7 8:8		
82:20 83:23	57:1,20 62:10	5		
<b>Y-O-O</b> 10:10	64:4,9,21 68:14	<b>5</b> 7:4 13:10 68:3,5,6		
	77:7,13 83:23,25	82:22,22,24,25		
0	<b>20th</b> 70:7	83:10 84:6		
<b>02</b> 64:3 68:13	<b>2000</b> 15:22	5th 72:11		
	<b>2000</b> 13.22 <b>20006</b> 2:7 4:19	<b>500</b> 2:7 4:18		
1	<b>2004</b> 13:10	<b>56</b> 6:7		
<b>1</b> 6:16 8:3 20:2	<b>2014</b> 41:1,12 56:10	56D-WF-2881718		
37:20,21,25 38:3	56:21 57:5,13	31:22		
38:6 39:4 64:10	58:14 64:17 68:23	31.22		
<b>1B</b> 58:21 73:4	69:1 77:18,20	6		
83:10	78:7	<b>6</b> 7:6 64:3 68:13		
<b>1B16</b> 45:14,15	<b>2015</b> 1:14 2:4 8:11	69:4,5 80:16,18		
<b>1B43</b> 7:7 33:14	39:23 46:25 56:7	80:19 81:13,21		
69:9,21 70:4,14	57:16 70:7,18	82:4,9,12 83:4		
73:8	72:2,11 78:5,8	<b>60336</b> 41:4		
<b>1B44</b> 28:13 68:15	<b>2016</b> 85:25	<b>67</b> 6:8		
68:20 83:12,13,15	<b>2010</b> 85.25 <b>202-289-1313</b> 4:20	<b>68</b> 7:4		
84:2,5	<b>202-289-1313</b> 4.20 <b>202-616-2840</b> 3:9	<b>69</b> 7:6		
<b>10</b> 6:3	<b>20530</b> 3:8			
<b>10th</b> 57:13	<b>22314</b> 3:18 4:8	7		
<b>10:02</b> 2:5 8:12	<b>2318</b> 3:16	<b>7th</b> 69:1		
<b>11:09</b> 67:18,19	<b>24/7</b> 62:25	<b>703-657-5903</b> 3:19		
<b>11:21</b> 67:20,22	<b>28</b> 1:14 2:4 6:18	<b>703-888-1943</b> 4:9		
<b>11:36</b> 84:13,15	8:11	<b>717</b> 4:6		
<b>1100</b> 3:17	<b>29th</b> 41:12	<b>73</b> 6:9		
	<b>2711 →</b> 1.12			
	•	-	. '	